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APRIL, 1960

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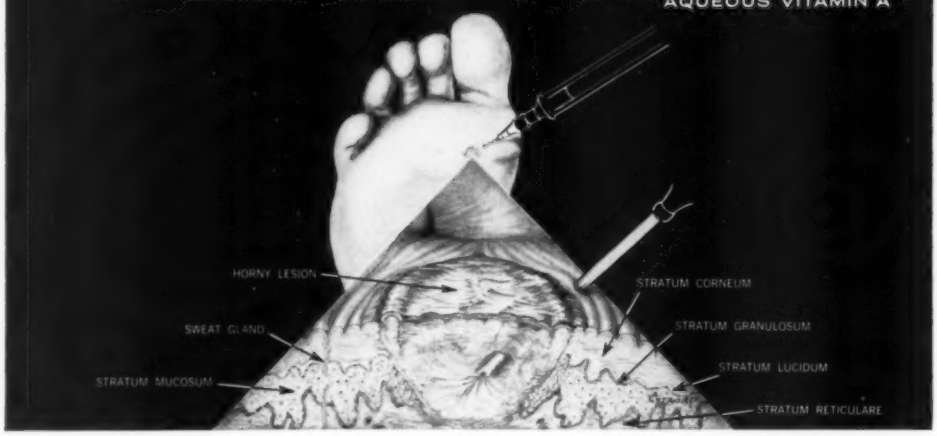

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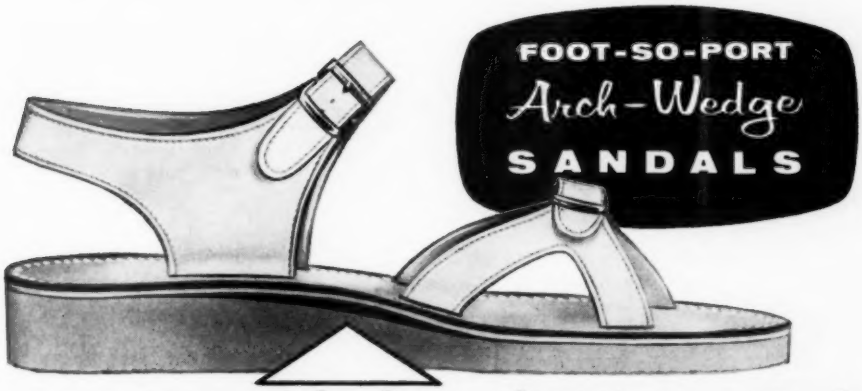

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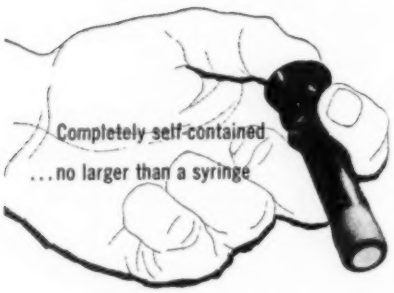

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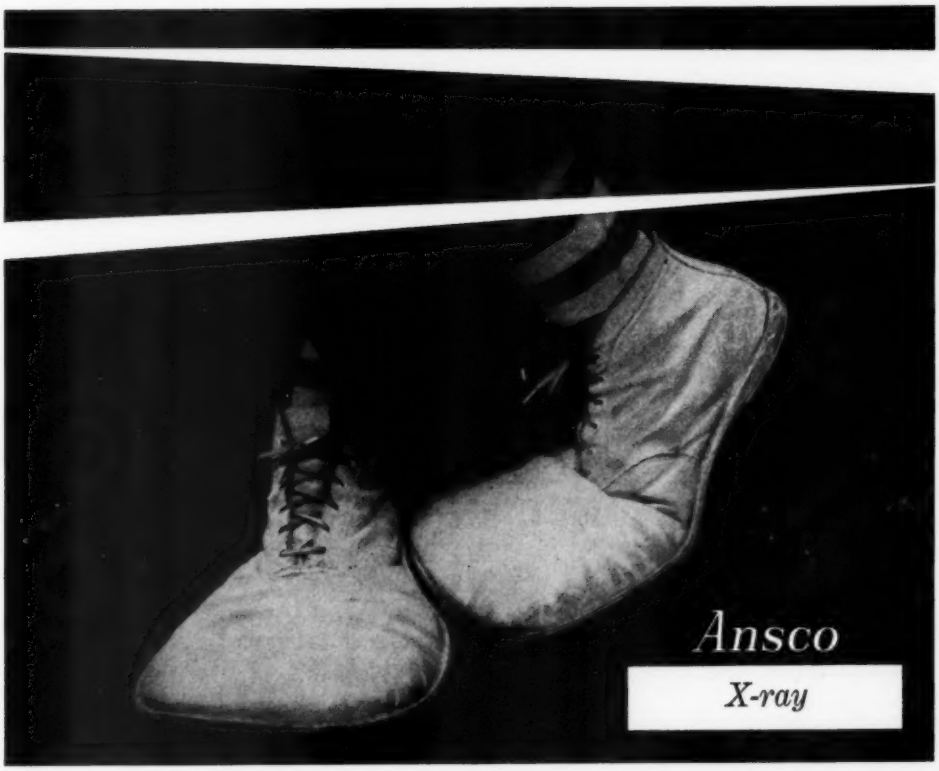

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Oregon Podiatry Association, Inc.	Walter L. Hay, Astor Bldg., Astoria, Oregon William J. Cutler, 4231 N.E. Broadway, Portland, Oregon
Pennsylvania Podiatry Association	James E. Bates, 5916 Greene St., Philadelphia, Pa. Arnold W. Newman, 5411 Chester Ave., Philadelphia, Pa. Richard C. Hess (Ex. Sec.), 227 State St., Harrisburg, Pa.
Rhode Island Podiatry Society	Conrad C. Cloutier, 290 Westminster St., Providence, R. I. A. Joseph O'Rourke, 176 Academy St., Providence, R. I.
South Carolina Podiatry Association	James D. Hill, 125½ W. Whitner St., Anderson, S. C. H. A. McAninch, 169 Hall St., Spartanburg, S. C.
South Dakota Association of Chiropodists	M. D. Scofield, 120 W. 11th St., Sioux Falls, S. Dak. Francis W. Unzicker, 129 E. Second, Mitchell, S. D.
Tennessee Chiropody Association	Richard J. Koch, 1203 Warner Bldg., Nashville, Tenn. Ronald E. Fields, 524 Bennie Dillon Bldg., Nashville, Tenn.
Texas, Chiropody Society of	Graham A. Scuddy, Goodhue Bldg., Beaumont, Texas Robert K. Bunch, 409 Hermann Professional Bldg., Houston, Tex.
Utah State Association of Chiropodists	Ralph Self, Boston Bldg., Salt Lake City, Utah Howard Jasperson, Judge Bldg., Salt Lake City, Utah
Vermont Chiropody Association	Gray S. Clark, 128 Merchants Row, Rutland, Vt. Regis P. Nolin, 14 Clarke St., Burlington, Vt.
Virginia, Podiatry Society of	I. T. Domsky, 2780 S. Randolph St., Arlington, Va. I. Leonard Kaplan, 718 Court St., Portsmouth, Va.
Washington State Podiatry Association	R. A. Watters, 707 N. Eye St., Tacoma, Wash. Kurt Blau, 501 Medical Arts Bldg., Tacoma 2, Wash.
West Virginia, Chiropody Society of	Earl Sheff, 227 Morrison Bldg., Charleston, W. Va. G. A. Taylor, 1st Huntington Natl. Bank Bldg., Huntington, W. Va.
Wisconsin Society of Chiropodists	Eugene V. Hurtienne, 2705 North 8th St., Sheboygan, Wisc. Quentin E. Copeland, 324 E. Wisconsin Ave., Milwaukee, Wisc.
Wyoming Podiatry Society	J. W. Scott, 21 East Works St., Sheridan, Wyo. Duane NeuSchultz, 2201 West A, Torrington, Wyoming

Affiliated Organizations

Women's Auxiliary A.P.A. (N.A.C.)—Mrs. Cleotha Parham, 5328 E. 26th St., Tulsa, Okla.
Military Association of Podiatrists—Lt. John L. Charlton, Jr., D.S.C., Podiatry Clinic, Walter Reed Army Hospital, Washington, D. C.
American College of Foot Surgeons—J. M. Kohl, 3959 No. Lincoln Ave., Chicago, Ill.
American Society of Chiropodical Roentgenology—Joseph L. Starr, 1115 Main St., Bridgeport, Connecticut
Chiropody Bibliographical Research Society—S. E. Reed, 425 Kresge Bldg., Des Moines, Iowa
American College of Foot Orthopedists—L. B. Thompson, 5613 7th Ave., Kenosha, Wisc.
American Association of Hospital Podiatrists—H. Charles Lilienfeld, 101 W. 57th St., New York. N. Y.
American Podiatry Students Association—Scott Hale, 3231 W. North 24th Place, Milwaukee, Wisc.
American Board of Chiropodical Dermatology—Joy E. Adams, Florida National Bank Bldg., St. Petersburg, Fla.

Related

Federation of Chiropody-Podiatry Boards—L. A. Hansen, 800 Professional Bldg., Kansas City, Mo.
American Association of Colleges of Chiropody—Charles E. Krausz, 926 W. Lehigh Ave., Philadelphia, Pa.
National Board of Chiropody Examiners—Pierce B. Nelson, 1770 Eddy St., San Francisco, Cal.
American Academy of Chiropodists—Robert Smith, 77 James St. North, Hamilton, Ontario 10, Canada.
Academy of Podiatry—Louis Lewy, 285 Madison Ave., New York, N. Y.
American Podiatry Council—L. J. Friedman, 1186 Broadway, New York, N. Y.
Fellows Pedic Research Society—Irving M. Sward, 4948 W. Dempster Rd., Skokie, Ill.
American Foot Health Foundation—Sidney Hirschberg, 107-07 Continental Ave., Forest Hills, N. Y.

ACCREDITED COLLEGES

California Podiatry College
1770 Eddy Street
San Francisco, Calif.

Chicago College of Chiropody
1422 W. Monroe Street
Chicago, Ill.

Illinois College of Chiropody and Foot Surgery
1327 North Clark Street
Chicago, Ill.

M. J. Lewi College of Podiatry
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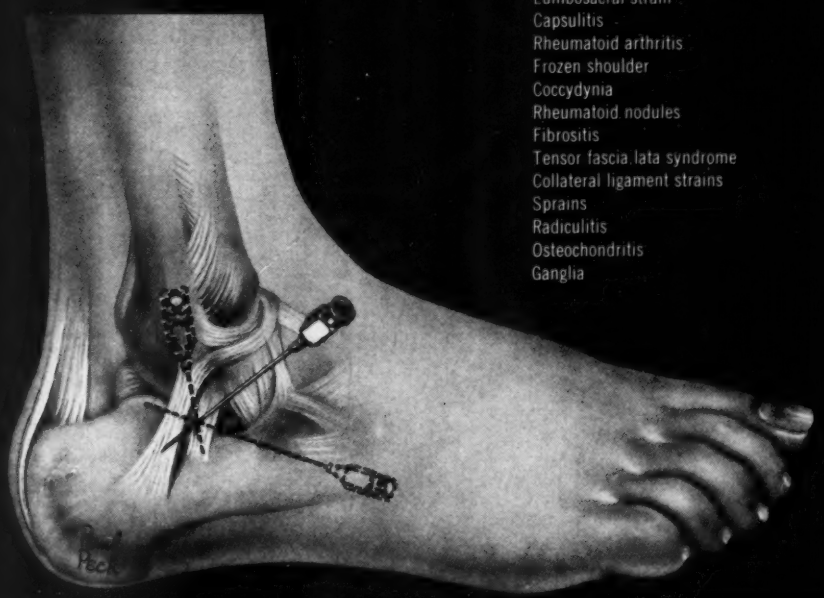

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- Lumbosacral strain
- Capsulitis
- Rheumatoid arthritis
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- Coccydynia
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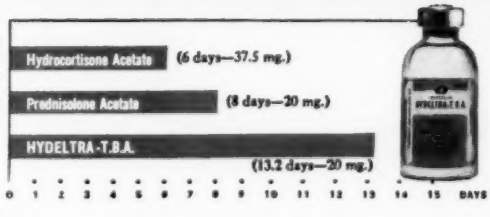
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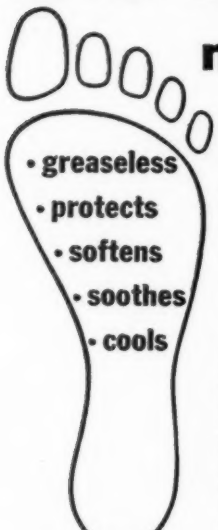

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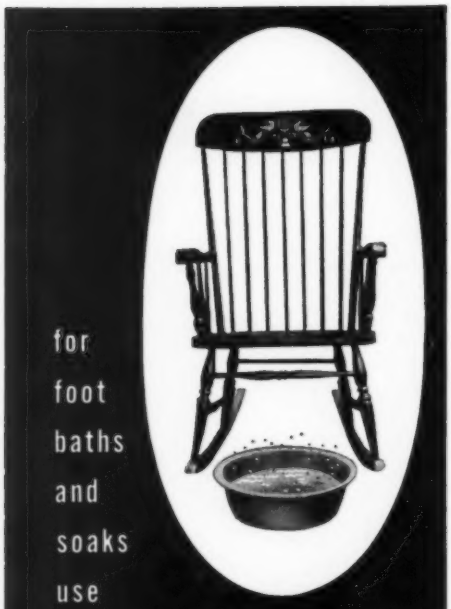

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STATE BOARD MEETINGS FOR EXAMINATION AND LICENSURE

Alabama

The Alabama Medical Board of Examiners. **Board Secretary:**

Arizona

The Arizona State Board of Chiropody Examiners. **Board Secretary:** Dr. Julius Citron, 40 E. Thomas Rd., Phoenix, Arizona.

Arkansas

Arkansas State Chiropody Examining Board. **Board Secretary:** Dr. Bernard S. Paul, 800 First National Bank Bldg., Fort Smith, Ark.

California

The California Chiropody Examination Committee will meet for examination tentatively in Los Angeles, Aug. 22-25, 1960; in San Francisco, June 20-23; and in Sacramento, Oct. 17-20, 1960. **Board Chairman:** Abraham Hoffman, D.S.C., 2320 Sutter St., San Francisco, Calif. **Executive Secretary:** Mr. Wallace Thompson, 1021 O St., Sacramento, Calif.

Colorado

Colorado State Board of Chiropody Examiners. **Board President:** Dr. G. F. Heibig, 327 Logan St., Denver, Colo.

Connecticut

The Connecticut Board of Examiners in Chiropody. **Board Secretary:** Dr. F. J. Ruggiero, 3 South Main Street, W. Hartford 7, Conn.

Delaware

The State Board of Chiropody Examiners of Delaware. **Board Secretary:** Dr. Bertram H. Blum, 112 So. State St., Dela.

District of Columbia

The Board of Podiatry Examiners of the District of Columbia will meet for examination semi-annually in January and in July. **Board Secretary:** Harry L. Hoffman, Ph. G., D.S.C., Dept. of Occupations and Professions, 1740 Massachusetts Ave., N.W., Washington 6, D. C.

Florida

The Florida State Board of Chiropody Examiners. **Board Secretary:** Dr. Heywood A. Dowling, 203 Greenleaf Bldg., Jacksonville, Fla.

Georgia

The Georgia State Board of Podiatry Examiners will meet for reciprocity and examination in June each year, at the discretion of the Board. **Board President:** Dr. Charles W. Beasley, Jr., 1205 First National Bank Bldg., Atlanta, Ga.

Idaho

The Idaho State Board of Chiropody-Podiatry. **Board Secretary:** Dr. J. E. Franden, 412 Eastman Bldg., Boise, Idaho.

Illinois

The Illinois Chiropody Examining Committee will meet for reciprocity July 22, 1960, and examinations July 22-24, 1960, at 160 No. LaSalle St., Chicago, Ill. **Superintendent of Registration:** Fredric B. Seicke, Room 109, State House, Springfield, Ill.

Indiana

The Indiana State Board of Podiatry Examiners. **Board Secretary:** P. T. Lamey, M.D., 422 Citizens Bank Bldg., Anderson, Ind.

Iowa

The Iowa State Board of Chiropody Examiners will meet for examination in the State Office Building, Des Moines, June 13-15, 1960. **Board Secretary:** Dr. C. C. Reinheimer, 111 W. 2nd St. South, Newton, Iowa.

Kansas

The Kansas State Board of Podiatry Examiners will meet for examination and reciprocity at the Kansas University Medical Center, Kansas City, Kansas, June 1960. **Board President:** Dr. L. E. Krause, 1107 Williams St., Great Bend, Kansas, or Kansas Board of Podiatry Examiners, 872 New Brotherhood Bldg., Kansas City, Kansas. **Board Secretary:** F. N. Nash, M.D., 864 New Brotherhood Bldg., Kansas City, Kansas.

Kentucky

The Kentucky State Board of Chiropody meets on the third Saturday and Sunday of June and the first Saturday and Sunday of December each year. The December meeting is for re-examination only. **Board Secretary:** Dr. Chester A. Nava, 4140 Shelbyville Rd., Louisville, Ky.

Louisiana

Louisiana State Board of Medical Examiners will meet for examination in New Orleans, June 5-7, 1960. **Board Secretary:** C. H. Lawson, M.D., Hibernia Bank Bldg., New Orleans 12, La.

Maine

The Maine Board of Examiners in Chiropody and Podiatry. **Board Secretary:** Daniel A. Hanley, M.D., Box 637, Brunswick, Me.

Maryland

The Maryland Board of Chiropody Examiners. **Board Secretary:** Dr. S. Jack Kleger, 408 S. Division St., Salisbury, Md.

Massachusetts

The next board meeting of the Board of Registration in Chiropody-Podiatry will be held for reciprocity, conditionally, and examination, June and December, at Room 33, State House, Boston, Mass. **Board Secretary:** Robert M. Quinn, D.S.C., 16 South St., Pittsfield, Mass.

Michigan

The Michigan State Board of Registration in Chiropody will meet for examination in June of each year. **Board Secretary:** Dr. Walter J. Jeffery, 1950 Madison Ave., S.E., Grand Rapids, Michigan.

Minnesota

The Minnesota Board of Chiropody Examiners will meet for examination June 16-17, 1960. **Board Secretary:** Dr. Palmer H. Goulson, 612 Southdale Medical Bldg., Minneapolis 10, Minn.

Mississippi

The Mississippi State Board of Health. **Board Secretary:** Archie L. Gray, M.D., Box 1700, Jackson, Miss.

Missouri

The Missouri State Board of Chiropody will meet for reciprocity and examination, April 29-30, 1960, at the Jefferson Bldg., Jefferson City, Mo. **Board Secretary:** Dr. L. A. Hansen, 800 Professional Bldg., Kansas City, Mo.

Montana

The Montana State Board of Chiropody-Medical Examiners will meet when the need arises for reciprocity or examination at the Capitol Bldg., Helena, Mont. **Board Secretary:** Dr. L. M. Jennings, 411 First National Bank, Bozeman, Mont.

Nebraska

The Nebraska State Board of Examiners in Chiropody will meet for reciprocity and examination at the State Capitol Bldg., Lincoln, Nebr., July 1960. **Board Secretary:** Herman F. Gartner, D.S.C., First Natl. Bank Bldg., Lincoln, Nebr.

Nevada

The Nevada State Chiropody Board. **Board Secretary:** Dr. William A. Edwards, 150 No. Arlington St., Reno, Nevada.

New Hampshire

The New Hampshire Board of Registration in Chiropody. **Board Secretary:** Edward W. Colby, M.D., 61 S. Spring St., Concord, N. H.

New Jersey

The New Jersey State Board of Medical Examiners meets semi-annually for examination on the third Tuesday, Wednesday, Thursday and Friday of June and October. **Board Secretary:** Royal A. Schaaf, M.D., 28 West State St., Trenton 8, N. J.

New Mexico

The New Mexico State Board of Podiatry will meet for reciprocity and examination, July 16, 17, 1960, in Albuquerque. **Board Secretary:** Morris Haas, D.S.C., 121 Sycamore St., N.E., Albuquerque, N. M.

New York

The New York State Board of Podiatry Examiners will meet for examination, June 28 to July 1, 1960, in New York City, Albany, Syracuse, Buffalo and Rochester. **Board Secretary:** James O. Hoyle, Ed.D., 23 S. Pearl St., Albany, New York.

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—Cooper, W. M.: Am. J. Surg. 65:475, 1948.

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STATE BOARD *(Cont.)*

North Carolina
The North Carolina State Board of Chiropody Examiners will meet for examination, June 24, 1960, at the Robert E. Lee Hotel, Winston-Salem, N. C. **Board Secretary:** Robert W. Getchell, D.S.C., P.O. Box 796, Goldsboro, N. C.

North Dakota
The next board meeting of the North Dakota Board of Registration in Chiropody will be held for reciprocity and examination at call at 301 Black Bldg., Fargo, N. Dak. **Board Secretary:** Joseph E. O'Brien, D.S.C., P.O. Box 872, Bismarck, No. Dak.

Ohio
The Ohio State Medical Board. **Examiner in Chiropody:** H. M. Platter, M.D., 21 W. Broad St., Columbus, Ohio.

Oklahoma
The Oklahoma State Board of Chiropody will meet for examination when necessary, in June and September and other times as needed. **Board Secretary:** Dr. Warren D. Long, 1217 No. Walker St., Oklahoma City, Okla.

Oregon
Oregon State Chropodists' Examining Board. **Board Secretary:** Richard H. Wilcox, M.D., 1400 S.W. Fifth Ave., Portland, Ore.

Pennsylvania
Pennsylvania State Board of Chiropody Examiners. **Board Chairman:** Dr. Ralph H. Orr, 424 Colorado Drive, Erie, Pa. **Board Secretary:** Dr. Jack S. Pincus, 26 N. Third St., Harrisburg, Pa.

Rhode Island
The Rhode Island Board of Examiners in Chiropody. **Administrator:** Thomas B. Casey, 366 State Office Bldg., Providence, R. I.

South Carolina
The South Carolina Board of Chiropody Examiners. **Board Secretary:** Dr. Charles W. Clark, 535 Harden St., Five Points, Columbia, South Carolina.

South Dakota
The South Dakota State Board of Chiropody Examiners will meet at the discretion of the Board. **Board Secretary:** Dr. Fred D. Rule, 204 Kresge Bldg., Sioux Falls, S. D.

Tennessee
The Tennessee Board of Registration in Chiropody will meet for examination August 1, 1960, in Nashville, Tenn. **Board Secretary:** Ronald E. Fields, 524 Bennie Dillon Bldg., Nashville 3, Tenn.

Texas
The Texas State Board of Chiropody Examiners. **Board Secretary:** Dr. Lewis M. Hoppock, P. O. Box 3315, Temple, Texas.

Utah
The Utah State Board of Chiropody Examiners. **Board Secretary:** Ward A. Burbidge, 1015 Medical Arts Bldg., Salt Lake City, Utah.

Vermont
Vermont Chiropody Association. **Board Secretary:** Gray S. Clark, Service Bldg., Rutland, Vt.

Virginia
Virginia Board of Medical Examiners. **Board Secretary:** Kenneth D. Graves, M.D., 631 First St., S.W., Roanoke, Va.

Washington
The Washington State Chiropody Examining Committee usually holds Basic Science and Chiropody examinations the first and/or second week in January and July, in Seattle. **Board Secretary:** Thomas A. Carter, Department of Licenses, Olympia, Wash.

West Virginia
Medical Licensing Board of West Virginia will meet for examination. **Board Secretary:** N. H. Dyer, M.D., 1800 E. Washington St., Charleston, W. Va.

Wisconsin
The Wisconsin State Board of Examiners. **Board Secretary:** O. J. Trimborn, D.S.C., 208 E. Wisconsin Ave., Milwaukee 2, Wis.

Wyoming
The Wyoming State Board of Registration in Chiropody-Podiatry. **Board Secretary:** Dr. J. W. Scott, 21 East Works St., Sheridan, Wyo.

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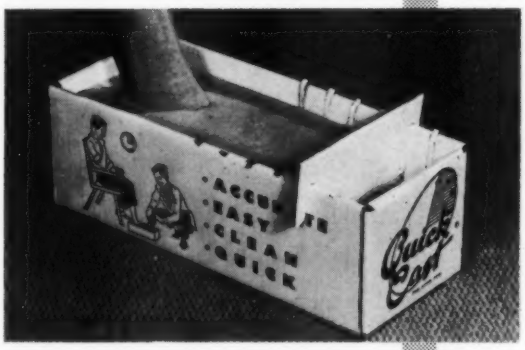

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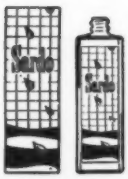

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1. Prentice, H., and Brezak, S.: Jrnl. Amer. Podiatry Assn., May 1958. 2. Spoor, H. J.: N. Y. State J. Med., Oct. 15, 1958.

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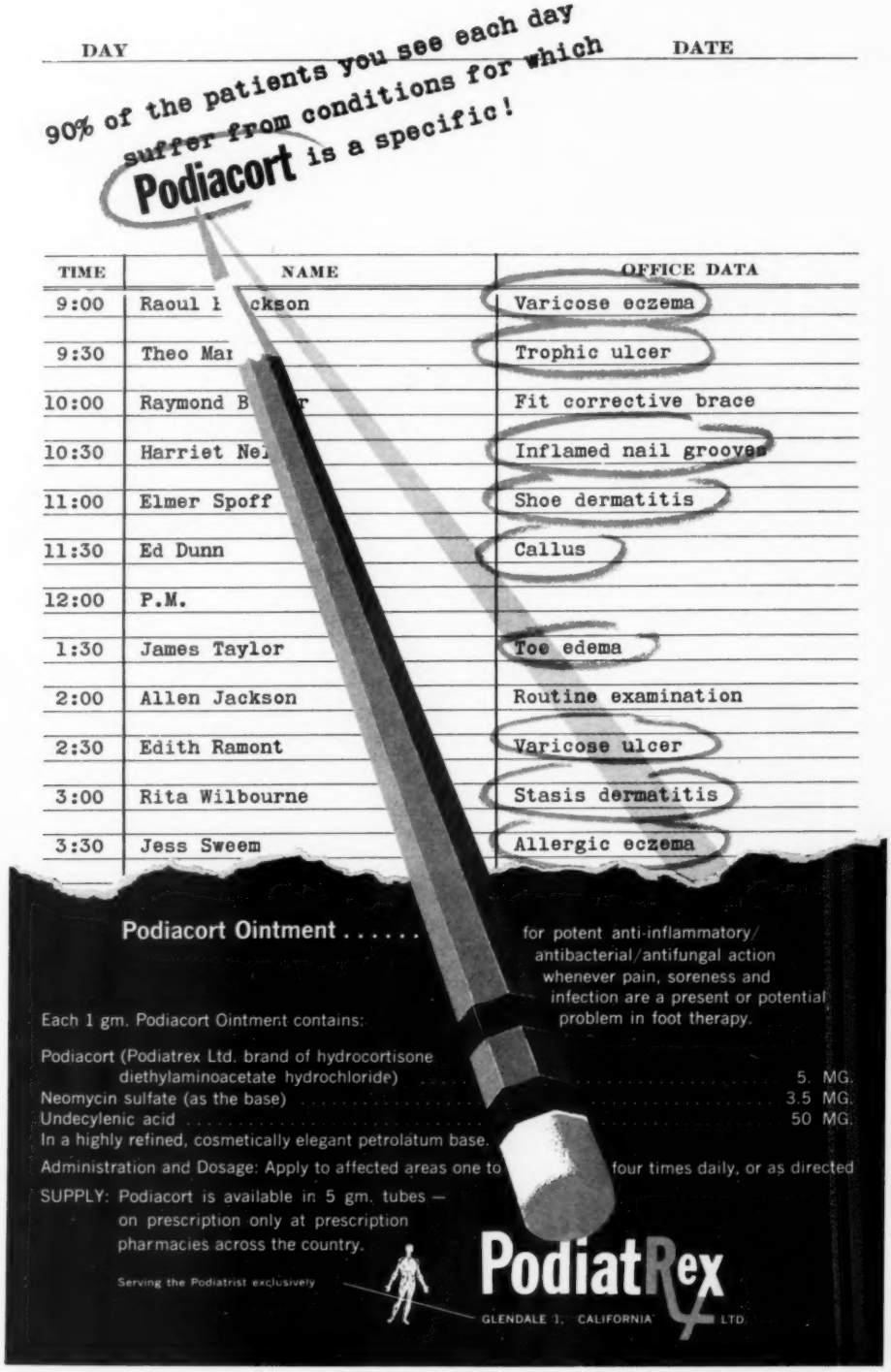
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11:00 Elmer Spoff
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11:30 Ed Dunn
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ONYCHOMYCOSIS
TREATMENT BY AVULSION AND ONYCHO-PHYTEX

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Of the various nail disorders, onychomycosis is next in importance, from a practical point of view, only to onychocryptosis. This observation is based on the fact that onychocryptosis generally is a more disabling clinical manifestation though, in actuality, more easily controlled or corrected.

White[1] in one of the earliest studies (1902) of ringworm of the nail reported but 11 in a series of 485 cases of nail affections. In 1959[2] he observed that onychomycosis (ringworm) had become prevalent to the extent of about 20% in his series of 1029 cases of diseases of the nails. Considered as rare in years past, onychomycosis is now considered the most common of the inflammatory nail diseases. This is due, without doubt, to a greater knowledge of mycology.

Howell[3] has indicated that: "First, we must diagnosis the fungus-infected nail. Secondly, with a minimum amount of home care and inconvenience to the patient, we must institute treatment. Thirdly, we must use a technique that is thorough in eliminating the infection."

Diagnosis

Podiatrists have an unusual and enviable opportunity of examining the nails[4], for through our portals go most of the professionally treated foot ills of the nation. This circumstance permits early diagnosis with a possible prevention of physical discomfort and financial loss to the patient.

Pardo-Castello[5] divides onychomycosis into three groups:

1. Onychia due to dermatophytes
2. Onychia due to favus
3. Onychia and paronychia due to monilia and yeasts.

Etiologically and clinically these groups differ from each other. Ortega[6] feels that the objective symptoms usually suffice in making a diagnosis though he warns that the congenital dystrophies, psoriasis, and a host of other simulating conditions should be kept in mind. Ignatoff[7] suggests cultures whereas White[1] believes it is well to confirm all suspected cases of onychomycosis by microscopic examination.

The monilial infections[8, 9] commonly associate themselves with an accompanying paronychia. This paronychia is the distinguishing clinical characteristic between monilial and other fungous infections. It usually is of a nonsuppurative nature.

Favus is rarely seen and usually appears with a thickening of the nail plate, becoming yellowish, scaly and powdery with a

great amount of debris underneath. The diagnosis is easy since there are accompanying typical scalp and skin lesions.[5, 12]

Trichophyton gypseum makes its appearance as circumscribed white plaques on the nail plate or it may appear as a mild scaling.

Trichophyton purpureum (T. rubrum) thickens the nail, causing it to become brittle, change to a brownish to yellowish color in the invaded areas, and to accumulate considerable subungual detritus.

Modes of Treatment

The vast number of antimycotic agents on the market is an indication that the ideal product is yet to be produced. These products are either locally irritative, disagreeable from the standpoint of color or odor, ineffective other than *in vitro*, or sometime cause allergic reactions.

Fletcher[10] states it well when he wrote, "All things considered, the treatment of onychomycosis in the past has presented a study in frustration with no one method offering significant results in our hands—except in isolated cases."

Schnyder[11] suggests the adherence to four fundamentals of therapy:

1. Explain to the patient the reason, aims and duration of the treatment.
2. Disinfection of all persons who live in the same household (environmental therapy).
3. Disinfection of the socks, stockings, bathroom and bedroom carpets as possible sources of reinfection.
4. Continuation of therapy for at least two weeks after the clinical cure.

To this should be added the importance of the disinfection of shoes and slippers.

General Considerations

White[2] indicated that surgical avulsion, where the fungi were deep in the nail plate, had not been very successful in his hands. Ignatoff[7] felt that avulsion was not worth the effort since recurrences were common. His observation was based on that of others.

Since nail avulsion has some ugly connotations and is thought to be, by the uninitiated, an extremely painful procedure, a criterion had to be set in indicating a justification for this mode of treatment.

It has been my observation that the invasion of fungus usually occurs either at the distal end and works back to the proximal end of the nail on a fairly even plane transversely, or along a side of the nail in a longitudinal strip, like a French land grant.

It is well known that the longitudinal strip-like mycotic infections that go under the eponychium, and the transverse invasions that cover one-third or more of the nail, are extremely reluctant to respond to treatment. It was on these two types that the method of treatment here described was used.

All cases were considered severe on the basis of the above description. It was impossible to get any history as to the duration of the infection since most of the patients indicated they had had the infection or discoloration for years, and that they would have been in for treatment sooner except that there had been no discomfort.

I[13, 14] have already indicated that onychomycosis is one of the causes of the incurvated nail and that the treatment of it does not correct the incurvated nail though it is advisable to do so prior to nail root resection to get the area as aseptic as possible. If this is not possible then the avulsion may be done concomitantly with the nail root resection.

Cultures on Sabouraud's media were used on all but a few cases easily recognized clinically.

White[15] has stated that it is almost criminal to avulse a nail without definitely establishing that the nail disease is of mycotic origin. This may be so. In our series of 35 cases (eight males and 27 females) all of which were observed postoperatively for more than six months, and on up to 15 months, all were carefully checked diagnos-

tically. We considered these our very worst cases of onychomycosis.

Avulsion and Postoperative Onycho-Phytex®[1]

Over the years various methods of avulsion have been advocated with varied results. This series was done with the aid of an atraumatic ungual elevator[16] involving some 80 nails.

Under a toe block anesthetic the nails were avulsed and the nail beds carefully debrided. Telfa®[2] was applied to the denuded area covered by a light dressing. Pain is minimal for in the use of this elevator there is no osseous damage. Full weight - bearing may begin the following day though a cut-out shoe or slipper may be advisable if the dressing is bulky. The part is first redressed in 24 or 48 hours since dressing becomes somewhat sanguineous and stiff. Following re-dressings are done at five-day intervals for several times. The moment the nail bed is dry the patient is instructed on the b.i.d. application of Onycho-Phytex, and on the proper sterilization of shoes and hose.

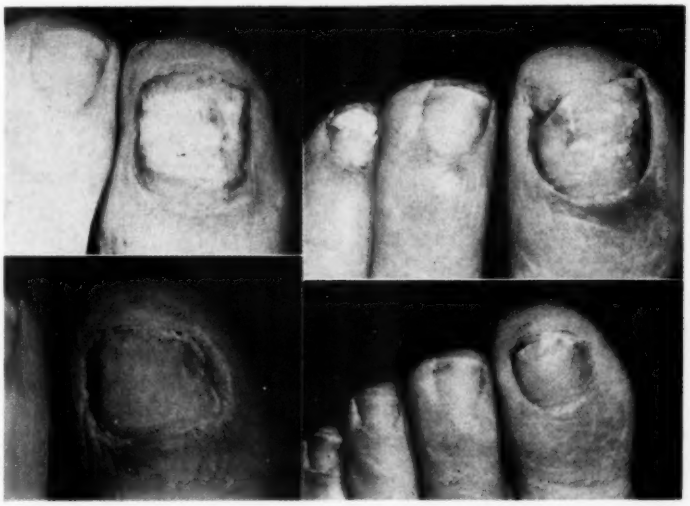

Fig. 1—*UPPER LEFT*, E. O., Male, age 40, Tricophyton Gypseum. Left 1st toenail treated routinely from June 24, 1943 to April 24, 1944. No improvement. Treated in service until January 1946 when office treatment was resumed and continued using fungicides and technics until June 20, 1959 on which day the nail was avulsed and the nail bed debrided. Photo taken June 20, 1959. *LOWER LEFT*, E. O., Post-Avulsion View on January 16, 1960. Patient used Onycho-Phytex b.i.d. and visited office once each month. *UPPER RIGHT*, C. P. Female, age 47, Tricophyton Gypseum. Left 1st and 3rd toenails. Nail avulsed and nail bed debrided June 10, 1959. *LOWER RIGHT*, C. P., Post-Avulsion View on January 20, 1960. Patient used Onycho-Phytex b.i.d. and visited office once each month.

It has been our experience[17, 18, 19] that this product is well tolerated. The skin turns dry and to a light tan eschar which is removed in the office on subsequent monthly visits.

I have used various other fungicides following avulsion, either in an ointment or a volatile base, none of which were as beneficial as Onycho-Phytex. Unquestionably this borotannic complex has an advantage on a perspiring skin in that it is partially dissolved by the perspiration and is reactivated.

Though the percentages of complete recoveries are not as high as one would desire one must remember that all of these nails could be classified as recalcitrant. Then too, there is room for improvement. Three of us had the patient apply the fungicide to the entire area twice daily while one[18] had it used three times daily.

It is important to see that both of the patient's feet, as well as those of the members of the family are, and are kept, entirely free from fungi by the use of a fungicidal powder.

The patients must have a complete

®[1] Wynlit Pharmaceuticals, Inc.
®[2] Bauer & Black

understanding of the part they play in achieving a happy prognosis. They must be made to realize that shoes must be disinfected at the beginning, during and at the end of the treatment, and house slippers and boots as well. Hose may be easily sterilized by either boiling or by running a hot iron over them while they are damp.

We have advised that Onycho-Phytex be applied for a minimum of four weeks after the nail has grown to full size and is clinically clear of mycosis.

Another source of recontamination is the home instrument used to cut the toenails. The patient should be advised as to its proper sterilization.

Patient cooperation ranged from 75% to 100%.

Summary

1. Atraumatic nail avulsion using Onycho-Phytex postoperatively has been discussed.

2. Only mycotic nails infected to the extent of 50% or more of the nail plate were considered as avulsion cases since these were the most difficult to clear up and the most likely to create nail deformity.

3. It was observed that this avulsion procedure is the source of little discomfort or disability.

4. It is observed also that onychomycosis is the frequent cause of incurvated or dystrophic nails.

5. Though this procedure is decisive and economical as compared to the antibiotics there is much room for improvement.

6. This series is entirely too small to be considered conclusive. Dietary measures, general debility, repeated disinfection of all shoes and treatment of all the toenails are a few of the factors that should be considered in an additional study.

My sincere thanks to my colleagues William Cope, Robert Barnes and Harold Rosenbloom for their cooperation in this study.

Kresge Building

TABLE I

FINDINGS ON 35 CASES OF NAIL AVULSION

No. of Cases		Diagnosis	Diagnosis Established: Clinical	Culture	Results: Cured	Impr'v'd	Impr'v'm'nt
3	Male	T. gypseum	2	1	0	3	0
3	Female	T. gypseum	0	3	3	0	0
4	Male	T. rubrum	0	4	1	3	0
16	Female	T. rubrum	3	13	8	8	0
1	Male	Monilia A.	0	1	0	1	0
6	Female	Monilia A.	0	6	4	1	1
0	Male	E. Inguinal	0	0	0	0	0
2	Female	E. Inguinal	0	2	2	0	0
8	Male						
28	Female		5	30	18 (51%)	16 (46%)	1 (3%)

Observations

Table I "Cured" indicates a nail that has fully recovered from all clinical evidences of mycotic infection.

"Improved" indicates those cases in which there has been only a slight recurrence of either the old or a new infection. Since fungi may be cultured off a normal nail plate it is difficult to determine if the infection is a new one or part of the old. In most instances the patient was happy with the result though we were looking for a clinically clear nail plate.

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TREATMENT OF PRURITUS IN TINEA PEDIS: A PLACEBO CONTROLLED STUDY*

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THE treatment of fungus infections is largely dependent upon presenting symptoms and can include any or all of the following phases: 1) the treatment of secondary bacterial infections; 2) the treatment of the fungus infection, both of which produce physical manifestations or symptoms; and 3) the treatment of associated pruritus which, unless it leads to excoriation, is a subjective symptom.

Secondary infections usually respond to mild antiseptic soaks and oral or parenteral antibiotics. Until these infections are treated, treatment of the fungus infection should be delayed. Definitive antifungal treatment should be further delayed until a culture or microscopic examination can be made to determine the infecting organism. Medication, when instituted, should be as mild as possible. There are many single or combined antifungal agents, and although none are specific in vivo, the fungus usually clears up upon application of proper therapy in a short period of time. Recurrence is very common, though not necessarily through reinfection.

The treatment of itching should be instituted when the patient is first seen. Providing prompt relief of this disturbing symptom is important and may serve as the only means of obtaining rapport with the patient, thereby enabling him to follow a prescribed regimen. Many drugs have been used for this purpose: the corticosteroids, the antihistamines, the "caine" group, camphor, menthol, and phenol. All of these drugs, whether used locally or orally, have side effects, some of which are more serious than others, and, therefore, should be used cautiously.

Recently the introduction of a new oral antipruritic, trimeprazine, has been found of value in reducing itching. This drug is

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related to chlorpromazine, being a phenothiazine derivative, and has proved very effective when administered orally. Out of 892 patients reported in the literature approximately 70% to 90% have obtained consistently good or excellent relief from itching after taking the drug; only infrequent side effects have been reported.

In another paper[1] in which I report on the use of this drug in twenty different pathologies, forty-four of the fifty-two patients obtained excellent results, six patients, good results, and only two, fair results. This paper is the result of treating forty-nine patients with fungus infection, all of whom had itching as a predominant symptom. Eighteen of these patients also had secondary bacterial infections which ranged from localized pyodermas to lymph node infections, reaching as high as the groin.

Method

Forty-nine patients (forty-three males and six females) were evaluated. They ranged in age from seventeen to forty-seven (mean age, twenty-five). Forty-two of the patients had tinea in an acute stage, while seven had chronic tinea. Twenty-three patients had concomitant hyperhidrosis, eleven had bromhidrosis, while five had anhidrosis. Most of the patients had acute symptoms that had been present for from a few days to several weeks; those with chronic tinea had symptoms for as long as twenty years. Local therapy was immediately instituted for either the secondary infection, if present, or for the fungal infection.

Since itching in most patients, especially those with tinea pedis, occurs mainly at night just before retiring, trimeprazine was used only at bedtime. To keep the evaluation as controlled as possible, all patients were told to take a 2.5 mg. tablet fifteen to thirty minutes before retiring, followed by a second, and if necessary, a third or even a fourth tablet, at twenty-minute intervals, if pruritus was still present. Only two patients required as much as four tablets.

Twenty-seven patients received a placebo in place of antipruritic medication for the first three days of therapy. Following this period they received trimeprazine. The and were given trimeprazine for itching when they were first seen. The duration of treatment with trimeprazine lasted from six days to six weeks. Urinalysis and blood counts were done on twenty-two of the patients before, during, and after treatment with the drug.

Results

Results were based on the degree of relief of itching and on physical examination of the patient for signs of scratching. Results were considered "excellent" if the itching was completely relieved; "good" if it was considerably diminished; "fair" if it was slightly diminished; and "poor" if it was unaffected.

TABLE I

Placebo Results				Trimeprazine Results				Total
Excel.	Good	Fair	Poor	Excel.	Good	Fair	Poor	Treated
6	6	12	3	20	5	2	0	27
Statistical Results — $X^2 = 4.16$ — $p = .05$								
				18	4	0	0	22
				38	9	2	0	49
				96%		4%		

Results are shown in Table I. During the three-day period when they were receiving placebo medication, six patients reported excellent relief of itching, six reported good relief, twelve, fair relief, and three, no relief. Since the patients were told that they would experience relief of itching from the placebo (although they weren't told it was a placebo) it seems probable that their results were due either to a psychological response or to the wet dressings that had been prescribed for the fungal or secondary infection. When these same patients were

placed on trimeprazine, twenty patients reported excellent relief from itching, five reported good relief, and two, fair relief. All these results were reported within the first twenty-four hours after trimeprazine was initiated. A statistical analysis of the data indicates that the results obtained after the patients were given trimeprazine are statistically significant from those obtained when they were given the placebo.

Of the twenty-two patients who received trimeprazine as a first course of therapy, eighteen obtained excellent results, and four obtained good results within the first twenty-four hours of therapy. It is, of course, difficult to evaluate the specific value of trimeprazine in these patients since all of them were also receiving treatment for either the fungus infection or a secondary infection.

To obtain relief of itching, two patients required one to four tablets of trimeprazine, two required one to three tablets, eighteen required one to two tablets and twenty-seven required only one tablet. It is interesting to note that the six patients with excellent results and the six with good results taking the placebo only required one tablet of placebo; the twelve having fair results were taking two tablets of the placebo and the three having no relief were taking as many as four placebo tablets.

The most common side effect noted was mild drowsiness which was reported by thirty-one patients. This was welcome, as it gave promise of a good night's sleep. Other side effects were nausea—one patient; dryness of mouth—one patient; and headaches—four patients. These were all transient and all disappeared as treatment progressed. No changes were observed in the blood and urine studies that were done. The most trimeprazine that was administered to any one patient was 152.5 mg. in forty-four days or approximately 3.5 mg. per day. The largest amount of trimeprazine given per day for a prolonged period of time was 6.3 mg. (127.5 mg. in twenty days). There have been no reports of any serious toxic or side effects with dosages this small. Only one case of agranulocytosis caused by trimeprazine has been reported.[1] This was a patient that received over one thousand mg. in fifty days.

Due to the reduced amount of scratching observed in the patients taking trimeprazine, it is my impression that the total treatment time was less than the same type of patient without the trimeprazine.

681 Bergen Ave.

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"Look not mournfully into the past; it comes not back again. Go forth to face the future with faith and courage."

—Longfellow

CLINICAL OBSERVATIONS ON THE USE OF GRISEOFULVIN BY MOUTH IN FUNGOUS DISEASES

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GRISEOFULVIN was discovered in 1939 by Oxford and colleagues[1] and its chemical structure was solved by Grove and colleagues[2] in 1951. Unfortunately its value in the treatment of superficial fungous infections was not appreciated until the *in vivo* animal studies of Gentles and colleagues[3,4] in 1958 indicated that rapid cures of dermatomycoses could be obtained by oral administration. Since publication of the early enthusiastic clinical reports by Riehl,[5] Williams and colleagues,[6] and Blank and Roth,[7] griseofulvin has been studied intensively, especially in England and America.[8]

Method

Griseofulvin was used to treat 20 patients with confirmed superficial fungous infections of the nails, hands, or feet. In some patients tinea cruris or corporis was also observed. One patient (case 1) had an associated Pseudomonas aeruginosa infection which had colored the nails green.

The dosage of griseofulvin* was one 250 mg. tablet four times daily. Children received two or three tablets daily, in proportion to age and weight.

Results

Clinical observations among this group of patients are summarized in the chart. The slow improvement in one patient (case 13) apparently was due to the fact that dosage originally was not adjusted for his weight (230 pounds); the rate of improvement probably will increase on the higher doses which are now being used. The only patient who showed a consistently poor response (case 14) had numerous associated allergies and it is possible that factors unrelated to the infection are responsible for the therapeutic failure.

Rapid symptomatic improvement occurred in the other 18 patients. In those with tinea of the smooth skin, marked relief of pruritus occurred within a few days and substantial clinical improvement was noted within two weeks. Dosage is being continued until several consecutive laboratory tests are negative.

Improvement was much slower when the nail was involved although the indications of healthy regrowth can be observed within a few weeks. However, treatment is being continued for several months until the parasitized nail is completely replaced with new growth. A mark was made on the proximal site of the infected nail before therapy and it is encouraging to patients and physician to watch the progress of the uninfected nail as it grows out.

The toxicity of the drug is low and large doses may be used safely. Although griseofulvin is derived from a species of penicil lium, cross-sensitivity to pencillin has not been found. In our series, one patient had rather severe headaches and another reported mild diarrhea during the early days of therapy. These symptoms can be controlled easily by reducing dosage temporarily or by giving one-half of the scored tablet at more frequent intervals. The drug was tolerated very well by the other 18 patients, including one who has a gastric ulcer. In adjusted doses, children tolerate the drug as well as adults.

Comment

In onychomycosis, mechanical debridement of the infected parts of the nail by clipping and abrasion enhances the process of recovery. Dosage in this indication may be reduced to two tablets daily when im-

* Supplied as Fulvicin by the Schering Corporation, Bloomfield, New Jersey, through the courtesy of G. Kenneth Hawkins, M.D.

TABLE I
CLINICAL RESULTS WITH ORAL GRISEOFULVIN

Case number; age; sex	Type of lesion*	Improvement
1-52 M	tinea pedis & manus, onychomycosis	excellent
2- 6 F	tinea pedis	good
3-30 M	tinea pedis	good
4-60 M	tinea pedis & cruris	excellent
5-14 M	tinea pedis & cruris	good
6-40 M	tinea pedis	good
7-50 M	tinea pedis & manus	excellent
8-45 M	tinea pedis & corporis	good
9-18 M	tinea pedis	excellent
10-27 M	tinea pedis & manus	excellent
11-60 F	tinea pedis, onychomycosis	good
12-50 F	tinea pedis, onychomycosis	good
13-42 M	onychomycosis	slow
14-48 M	tinea pedis & manus	poor
15-48 M	tinea pedis & corporis	excellent
16-55 M	tinea pedis & corporis	good; excellent
17-40 M	tinea pedis & manus	good
18- 8 M	tinea pedis	excellent
19-10 M	tinea pedis	excellent
20-56 M	tinea pedis, onychomycosis	good

*In cases 1 through 14 the infecting organism was Trichophyton rubrum; 15 through 19, Trichophyton mentagrophytes; 20, Epidermophyton floccosum.

provement has been noted. It is advisable to continue therapy for several weeks after clinical improvement in the nail appears to be complete.

It is important to verify the clinical diagnosis of a fungous disease by appropriate laboratory studies such as direct microscopic examination with potassium hydroxide and culture of the organism in Sabouraud's glucose agar. These simple tests will differentiate dermatomycoses from other dermatoses, such as psoriasis, dermatitis, or eczema, which may appear similar clinically.

Fortunately the fungi which most commonly cause tinea—Trichophyton rubrum and mentagrophytes, Microsporum audouini and canis, and Epidermophyton floccosum—are arrested by griseofulvin. The drug has no value in the treatment of Candidiasis (moniliasis).

Topical application of griseofulvin is not effective, probably because the drug does not penetrate the skin in sufficient depth to reach the parasitized area.

Summary

Good or excellent relief of tinea of the skin and nails occurred rapidly in 18 of 20 patients treated with griseofulvin, one gram daily in four divided doses. Laboratory studies confirmed the diagnosis and clinical improvement. Headache occurred in one patient and mild diarrhea in another during the first days of therapy; there were no other untoward effects.

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GRISEOFULVIN IN PODIATRY

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Of all the conditions which podiatrists are called upon to treat, none is more difficult that tinea pedis. The voluminous literature about fungous infections perfectly illustrates the aphorism that the more written about a subject, the less known about it. There appear to be as many "cures" as there are patients; if all the paints, powders, lotions, creams, salves, ointments, and solutions which are available for this condition were laid end to end it would probably be an excellent thing.

Part of the difficulty in treatment derives from problems of diagnosis. Tinea pedis can appear in a variety of clinical forms from simple erythema and scaling to large vesicular eruptions with occasional "id" reactions on the hands or trunk. This disease can mimic dermatoses of nonfungous origin and vice-versa. It is therefore essential that an attempt be made to confirm, with appropriate laboratory studies, any clinical diagnosis of fungous infection.

This is often a difficult procedure. In onychomycosis of the toenails, laboratory results will be definitive only in thirty per cent of the patients tested and in tinea pedis results are only slightly better. However, laboratory diagnostic aids should not be ignored since undoubtedly it is more desirable to be certain of the diagnosis in thirty to fifty per cent of one's patients than in none at all.

It is not known if the dermatophyte is transmitted by contact, through the air, or in fomites. Although presumably all persons are exposed to the infecting organism some become its victims and others do not. Wilson[1] believes that the presence of dermatomycosis indicates a defect in the immunologic mechanism.

Much has been written on the prevention of tinea pedis. We believe that no special measures are required; standard personal hygiene which includes frequent bathing, thorough drying, and application of powder to the feet and between the toes is sufficient. If an individual is susceptible to the infec-

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tion, no amount of prophylaxis—boiling socks, using formaldehyde, having a personal bathing tub—will keep him free of it for life.

Physiology

The constant upward growth of the daughter cells of the stratum germinativum forces the overlying cells to move upward to the surface of the epidermis, where they eventually shed. The fungi which cause superficial mycoses are saprophytes; that is, they live on dead material and rarely survive in living tissue. When saprophytes attack living tissue and survive, it is likely that the invaded tissues are broken down and almost dead. Since the stratum corneum is composed chiefly of keratin, which is dead tissue, it supports the growth of the saprophytes.

The superficial fungi thus moved downward into the epidermis as the latter moves upward, becomes keratinized and is shed. If the fungi move downward more rapidly than the epidermal cells move upward, a stimulus in the form of an inflammatory reaction occurs and hastens the keratinization cycle. The rapidly-forming stratum corneum is thus able to shed the fungi. Clinically, this appears as an acute fungous infection which is usually not a treatment problem unless there are secondary complications. If the downward growth of the fungi is less rapid than the upward movement of the cells, a mild case of fungous infection occurs which also presents no treatment problem. If, however, the rate of growth of the fungi is equal to the rate of growth of the cells, no inflammatory reaction is provoked and the fungi can maintain themselves in each succeeding layer of epidermis. This is the chronic type of fungous infection which is so resistant to treatment.

Until very recently, the usual treatment for superficial fungous infections was application of a fungicidal, keratolytic agent to the infected skin, in the hope that the fungi would be reached by a quantity of the drug sufficient to destroy them. However, these agents generally could not penetrate the extremely resistant keratin layer and break the cycle and therefore therapy was not very effective.

Pharmacology

The ideal agent for treatment of superficial fungous infections could be safely administered internally in amounts sufficient to enable keratin to resist fungi completely. Griseofulvin is an agent for oral treatment of superficial fungous infections which appears to meet this requirement perfectly.

As Sulzberger and Baer[2] point out, the history of griseofulvin is especially interesting because it indicates that a unique and extremely useful drug can remain on laboratory shelves for years before its therapeutic possibilities are suspected. Oxford and his colleagues[3] isolated griseofulvin as a metabolic product of penicillium in 1939. Eight years later Brian[4] isolated a substance, also from species of penicillium, which he called the "curling factor" because it caused the normally straight hyphae of fungi to to become stunted and curled. That same year, 1947, Grove and McGowan[5] showed that Oxford's griseofulvin and Brian's curling factor were identical. In 1951 the chemical structure of this drug was solved by Grove and his colleagues.[6]

Griseofulvin was used only as an antifungal agent in plants until 1958 when Gentles[7] used it to treat induced microsporum canis infections in guinea pigs. Further work by Gentles and his colleagues[8] and by Martin[9] confirmed the profound and rapid effect of griseofulvin in ringworm in animals. Paget[10] studied the cytology of this drug.

Riehl,[11] an Austrian dermatologist, was the first to report use of griseofulvin to treat superficial fungous infections of the

hair, skin, and nails in humans. Williams and his colleagues[12] in England and Blank and Roth[13] in the United States carried out the pioneer clinical studies among fairly large groups of patients. Since then, many clinical investigators have published reports of the effectiveness of griseofulvin in tineas involving the hair, skin, and nails. It has been used in podiatric indications by Zelony[14] among others.

The mode of action of griseofulvin is not fully understood. It appears to be fungistatic rather than fungicidal and exerts its effect on the advancing tips of the fungal hyphae. It apparently acts on the surface of the fungi for the latter resumes normal growth if the griseofulvin is removed. Griseofulvin is absorbed by the keratin layer of the epidermis which then acts as a barrier to the advance of the organisms. As the impregnated layer of keratin grows outward, it is shed with the immobilized fungi before new fungous growth has invaded the succeeding layer.

Unequivocal diagnosis of fungous infection and identification of the infecting organism is especially imperative when treatment with griseofulvin is contemplated. Some practitioners believe that when any patient with a presumed superficial fungous infection fails to respond to griseofulvin within four weeks, the diagnosis was incorrect. Griseofulvin is specific for Microsporium, Trichophyton, and Epidermophyton organisms but not for Candida and not for fungi which cause the deep mycoses. It is not effective in dermatoses of nonfungous origin.

In the usual therapeutic doses, griseofulvin apparently is not toxic in humans. Previously investigators have performed careful laboratory studies in their patients and report that normal values for blood and urine remain unaffected even during long-term administration. Although griseofulvin is a derivative of some species of penicillium, aparently it does not provoke reactions in patients known to be sensitive to penicillin.[13]

Methods

No patient received griseofulvin unless the clinical evidence of a fungous infection was confirmed by laboratory procedures. To prepare cultures, a specimen of scale or vesicle from the infected skin, or a specimen of subungual debris if the nail was involved, was placed in Sabouraud's glucose agar medium. The organism could be identified after ten to twenty days. A specimen was also placed on a slide and stained with potassium hydroxide; this was examined under the microscope for the characteristic signs of fungous invasion. Patients with confirmed fungous infections were referred for a leukocyte count. The involved area was photographed in color.

Each patient then received a supply of griseofulvin* sufficient for two weeks of treatment at the recommended dosage level of 250 mg. (one tablet) four times daily. The leukocyte count and clinical examination was then repeated. If the leukocyte count remained normal this program was repeated, at two-week intervals, until recovery was complete.

No other treatment was used except that macerated tissue in the toe webs was removed and in onychomycoses the nails were thinned and the subungual debris was removed whenever this could be done without discomfort to the patient. Keratolytic agents were not used locally since it was assumed that griseofulvin would be lost with the keratin.

Twenty patients with fungous infections of the skin and/or nails of the foot have now been treated with griseofulvin.

Results

The thirteen patients with tinea pedis responded rapidly to griseofulvin. The mild cases cleared in two weeks and the chronic hyperkeratotic cases within four to six weeks. Pruritus usually was relieved in two or three days. Erythema bordering the lesions in the moccasin type of involvement disappeared in two to four weeks. Fissures in the intertriginous areas disappeared in

one or two weeks in mild cases and within four weeks in severe cases. The skin was normally soft and supple in all patients within six weeks.

A longer time is required to completely clear fungi from the more slowly-growing nail. After six weeks some growth of normal nail was observed at the proximal portions. Patients with nail involvement are still receiving griseofulvin. According to previous experience, the nail may be expected to clear in approximately four months. These results seem almost miraculous to patients who have had this condition for many years.

In one of our twenty patients there was a depression of leukocyte level sufficient to require discontinuance of therapy. No other significant side effects occurred in this series although a few patients noted transient headache or gastrointestinal distress which disappeared spontaneously despite continuation of therapy.

The following case reports are typical of those in our series.

A male presented a fungous infection of the feet, due to T. rubrum, which had been present for twenty years (Fig. 1 upper). He had been treated in the hospital on several occasions because of the intense itching and secondary infection from scratching. The skin of the plantar area was hyperkeratotic, erythematous, scaly, and roughened. The nails were discolored, roughened and opaque; much subungual debris was present. Pruritus was severe.

The patient received 250 mg. griseofulvin four times daily. On the third day, he telephoned to report that itching had subsided for the first time in many years. After four weeks (Fig. 1 lower), the skin appeared to be normal in color and texture; there was no hyperkeratosis, scaling, or erythema. The nail bed presented a more normal appearance and the subungual debris, which had softened, was easily removed. The leukocyte count remained normal. The

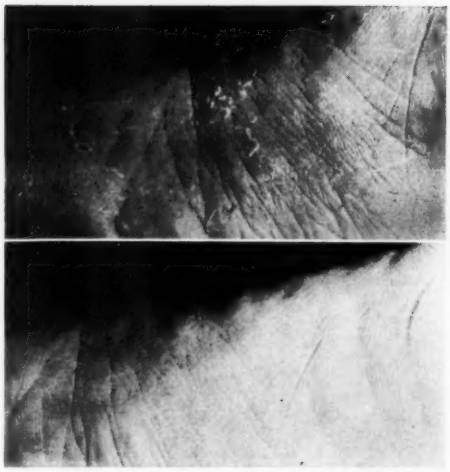

Fig. 1: Before (upper) and after four weeks of treatment with griseofulvin (lower).

patient will be maintained on griseofulvin until the onychomycosis is completely healed.

A male presented a fungous infection of the feet, due to T. rubrum, which had been present for fifteen years. The skin of the plantar area was scaly and erythematous; fissures and macerations were found bilaterally in the webs of the fourth and fifth toes. The nails were discolored and roughened and there was considerable subungual debris.

Treatment was with 250 mg. griseofulvin four times daily. The leukocyte count was normal before and two weeks after the start of therapy. Major improvement was observed after two weeks; the skin was softer and more supple. Scales and fissures were minimal. After four weeks of treatment the skin was clinically normal. The patient is being continued on griseofulvin for the onychomycosis.

A female presented a fungous infection, due to T. rubrum, of three years' duration (Fig. 2 upper). The skin on the plantar surface of the feet and toes was extremely dry, scaly, hyperkeratotic and erythematous.

Fig. 2: Before (upper) and after two weeks of treatment with griseofulvin (lower).

Subungual debris was present under the great toenails, which were discolored and roughened.

Griseofulvin, 250 mg. four times daily, was administered. After two weeks (Fig. 2 lower) the skin was free from scaling, discoloration, and hyperkeratosis. Griseofulvin is being continued for the onychomycosis.

Summary and Conclusion

Twenty patients with confirmed fungous infections of the feet and/or toenails were treated with griseofulvin orally. In the thirteen patients with infections of the skin, cure was obtained in two to six weeks; when the nail was involved it was necessary to continue treatment for several months although some growth of noninfected nail usually was observed after six weeks. The only side effect of therapy was transient depression of the leukocyte count in one patient.

Fungous infections of the skin and nails of the feet, definitely attributable to species of Trichophyton, Microsporum or Epidermophyton, will respond dramatically to oral griseofulvin. The optimal dosage is 250 mg. four times daily. Treatment should be continued for at least two weeks after the infection is no longer evident clinically or until at least two consecutive weekly cultures and miscroscopic examinations are negative. The necessary duration of treatment will vary with each patient although, in general, tineas of the skin can be cleared in approximately four weeks while onychomycoses must be treated for several months.

Since a small percentage of patients who receive griseofulvin will show a transient depression of the leukocyte count, it is advisable to record the count before and during administration. Generally, however, any depression will occur rather early in treatment; thus, if the first counts after therapy are normal the probability is that all future counts will be normal also.

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REPORT ON GRISEOFULVIN

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GRISEOFULVIN*, administered orally in tablet form, is specifically active against the superficial fungi which cause ringworm of the feet and nails, as well as tinea of the hair and body. This present report illustrates that a serum borne substance previously used in agriculture may have a confining and static effect on dermatophytes invading the skin of the feet or toenails.

Mycology

A cardinal rule in any dermatologic therapy is to make a definite diagnosis as soon as possible.[1] The podiatrist can acquire commercially prepared hermetically sealed culture media in test tubes, petri dishes and vials from his medical supply dealer. It is simple to inoculate the media with a specimen of hair, skin or nail to ascertain the specific organism. Colony growth in most instances should appear within ten days.

For the immediate determination of whether a fungus is the cause of symptoms, a specimen may be soaked and macerated in a 10 per cent sodium hydroxide or potassium hydroxide solution for fifteen minutes on a microscropic slide and covered with a cover slip. By careful focusing with little light, the hyphae or mycelia typical of fungi will be observed if present.[2] The preparation can be stained by adding 10 cc. of Parker 51 Superchrome blue-black ink to 20 cc. of 20% potassium hydroxide. The hyphae stain darker than the background; thus, even in cases where there are only a few mycelia threads detection is possible. Cultures may be stained in this manner also.[3]

Trichophyton mentagrophytes (also known as T. interdigitale or T. gypseum) appears on a culture within a few days growing rapidly as a white cottony colony. The reverse side of the culture dish reveals the colony growth as colorless to a light yellow. The colony may be of a powdery consistency.

Trichophyton rubrum (also known as T. purpureum) appears on the culture in a few days and spreads rapidly over the media as a white fluffy colony. It is red to purple on the reverse side of the petri dish.

Epidermophyton floccosum (also known as E. inguinale) is characterized by a colony growth which appears in a few days of a white cottony colony which rapidly turns yellowish-tan to greenish-yellow. This may also be noticed on the reverse side of the culture.

* The material used in this study was supplied as Fulvicin by Schering Corporation, Bloomfield, N. J.

Fig. 1 – Case No. 13. Onychomycosis of 30 years duration. Upper–before treatment. Lower – after treatment with 48 grams of griseofulvin.

Candida albicans (also known as Monilia albicans) has a moist, shiny, irregular, flat and cream-colored growth that appears within a day or two. There is a yeast-like odor.[4]

Symptomatology

Epidermophytosis is a most common lesion affecting the foot. It may be recognized in three stages:

(1) The acute vesicular type which indicates its presence by fissures and cracks between the toes. There is vesicle formation, which releases a serous fluid upon being punctured. There is the presence of maceration, burning, pruritis, redness and a soggy peeling. The Trichophyton mentagrophytes is the usual infecting organism with Candida albicans running a close second.

(2) The chronic intertriginous type is characterized by the symptoms being bilateral most of the time often in the longitudinal arch and a moccasin-like appearance. There is a cyanotic appearance on the plantar surface of the foot and a fine branny-type of scaling. Pruritis is severe. The nails may be involved in this type and the common invading organism is the Trichophyton rubrum.

(3) The chronic hyperkeratotic type is a rarer fungus infection and is characterized by a hyperkeratosis at the weight-bearing points of the foot. There may be deep fissures present that get secondarily infected. The Epidermophyton floccosum organism that is the general cause of this condition is responsive to treatment.

Griseofulvin

Griseofulvin is an antibiotic, a fermentation product of Penicillium griseofulvum Dierckx. It was discovered in 1939[5] and used as an agricultural anti-fungal agent for lettuce and tomatoes . . . even to the present time. It was not until 1958 in a paper by J. C. Gentles[6] that the potential usefulness of the drug in the treatment of ringworm in animals was demonstrated. Williams, Marten and Sarkany[7] published the first reports of the treatment of humans infected with ringworm with this oral griseofulvin. Other authors[8] proved in therapeutic trials that Trichophyton, Microsporon and Epidermophyton causing Tinea capitis, Tinea barbae, Tinea corporis and cruris, Onychomycosis and Tinea pedis are all responsive to this oral therapy to some degree.

Mode of Action

Ormsby says that the involvement of the skin by the ringworm fungus produces a certain amount of inflammatory reaction, which causes dilatation of the superficial blood vessels of the corium and a hyperplasia of the cellular elements.[9] With the ingestion of griseofulvin the drug is absorbed by the blood stream where it is incorporated with a cellular exudate as described by Peck[10] occurring in the papillary and subpapillary cutis, chiefly directly beneath the vesicles, the infiltrating cells for the most part being polymorphonuclear cells and lymphocytes. As these

cells move toward the stratum corneum from the stratum lucidum either by the wearing-out process of the corneum layer or by the actual leukocytic infiltration, they have absorbed griseofulvin by osmosis in sufficient quantity to create a fungistatic condition.

At one time griseofulvin was called the "curling factor" as indeed it causes an actual curling and stunting of the hyphae of the fungi.[11] The fungi coalesce into themselves forming a tight knot of multi-branched hyphae. As further keratinization takes place and more of the griseofulvin containing skin cells reach the outer surface of the epidermis, the fungus disease is arrested in its growth. The outer skin sloughs off as keratinization continues and eventually non-infested cells replace infected keratin. This process may be speeded-up after griseofulvin has been given a chance to be absorbed by the use of a keratolytic agent.

Discussion of Clinical Data

Twenty-six patients with tinea pedis or tinea unguium were treated (Table I) with griseofulvin. The age group ranged from as young as five years of age to as old as 90 years of age, with the average age being approximately 40. Twelve female patients and 14 male patients were involved in this study. The white race was represented by 24 persons and the negro by 2. Under causative organisms Candida albicans was involved 5 times, Trichophyton mentagrophytes 12 times, Epidermophyton floccosum 4 times and Trichophyton rubrum 5 times. The duration of illness ranged from as recent an infection as one week to as old and as chronic an infection as 30 years. The smallest dosage given daily was 250 mg. and the greatest one gram. The smallest total dosage which effected a "cure" was 5 gm. and the greatest 56. The longest period anyone was under treatment was 66 days and the shortest one week. All twenty-six persons showed some signs of improvement with clinical "cure" of subjective and objective symptoms being apparent in 14. In most cases a follow-up visit for check of old clinical symptoms was made 2 weeks after medication was stopped.

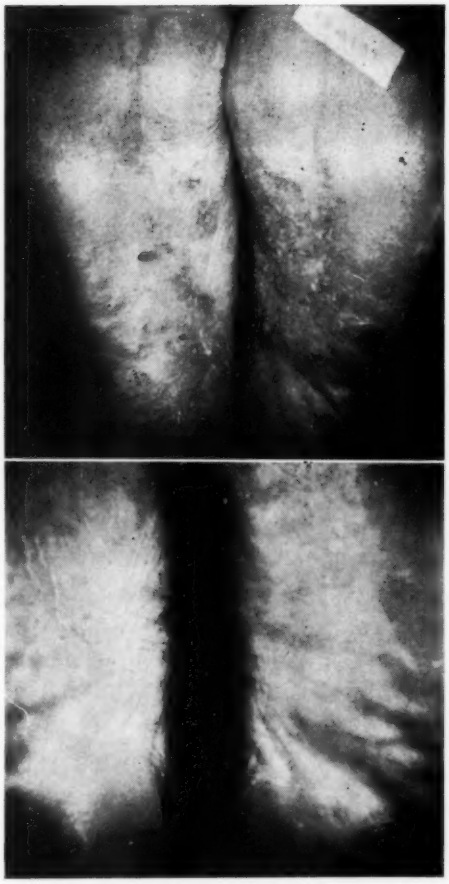

Fig. 2 – Case No. 21. T. rubrum infection of 18 years duration. Upper—before treatment. Lower—after treatment with 30 grams of griseofulvin.

Toxicity of griseofulvin showed itself to be minimal. In only one case (No. 1) was treatment actually stopped altogether owing to the nausea which accompanied the taking of griseofulvin orally, and this was further complicated by the presence

TABLE I

No.	Age Sex Race	Causative Organism	Duration of Illness	Daily Dosage in mg.	Total Dose in gm.	Duration of Treatment	Results	Sites of Involvement	Follow-up Period	Toxicity	Comments
1	26 F W	Candida albicans	6 mos.	1000 reduced after 1 day to 500	7	15 days	50% improvement	1st & 2nd toenails, bilateral Thumbs, bilateral	—	Marked nausea, complicated by early pregnancy & virus infection	New white lunular line appeared, although treatment discontinued after 2 weeks
2	35 M W	Trichophyton mentagrophytes	10 yrs.	500 reduced to 250 after 20 days	12.5	35 days	Clinically clear	Longitudinal arch, interdigital spaces, bilateral	2 wks.	None	—
3	33 F W	Epidermophyton floccosum	1 mo.	1000	14	14 days	Clinically clear	1st & 2nd toes interdigitally	1 mo.	None	—
4	52 M W	Trichophyton rubrum	12 yrs.	1000 reduced to 500 after 28 days	35	42 days	75% improved	2 big toenails	1 mo.	Stomach cramps that disappeared after 5 days	New growth is markedly apparent. No treatment for 1 mo. Drug supply exhausted.
5	72 F W	Trichophyton mentagrophytes	3 mos.	1000	14	14 days	Clinically clear	4th innerspaces, bilateral	2 wks.	None	—
6	44 M W	Trichophyton mentagrophytes	15 yrs. (From Service) (World War II)	1000 reduced to 500 after 10 days, reduced to 250 after 30 days	28	60 days	Clinically clear	Inner longitudinal arch, all innerspaces	2 wks.	None	Itching gone in 24 hours. Clinically clear in 10 days.
7	35 F W	Trichophyton rubrum	4 mos.	500	15	30 days	50% improved	2 big toenails	—	None	Still under treatment
8	64 F W	Trichophyton mentagrophytes	3 mos.	1000 reduced after 4 days to 500	14	21 days	Clinically clear	3 & 4 innerspaces, bilateral	2 wks.	Loose stool, diarrhea disappeared after dosage reduced	Head cleared in one week
9	46 F N	Epidermophyton floccosum	2 yrs.	1000 reduced to 500 after 4 days	22	44 days	Clinically clear	Lateral borders & around heels of both feet	2 wks.	Stomach cramps diminished with ½ dose	—
10	69 M W	Trichophyton mentagrophytes	2 yrs.	1000	10	10 days	Clinically clear	3rd & 4th innerspaces, bilateral	2 wks.	None	—
11	5 M W	Trichophyton mentagrophytes	2 mos.	250	5	19 days	Clinically clear	2, 3 & 4 metatarsal heads bilateral	2 wks.	None	Peeling. No itch.
12	36 F W	Trichophyton rubrum	6 yrs.	500	7	14 days	Slight improvement	2 5th toenails	—	None	Still under treatment. Drug supply exhausted.
13	90 M W	Trichophyton mentagrophytes	30 yrs.	1000 reduced after 30 days to 500	48	66 days	75% improved	2 big toenails	—	None	Still under treatment. Drug supply exhausted
14	30 M W	Epidermophyton floccosum	23 yrs.	1000	56	56 days	50% improved	Entire plantar surface of right foot (also right hand)	—	Slight stomach cramps at beginning of treatment	Still under treatment. Drug supply exhausted.

15	43	M	W	Candida albicans	5 yrs.	1000 reduced after 21 days to 500 mg.	31	42 days	Epidermophytosis clinically clear. Onychomycosis 50% improved.	In all interdigital spaces, and nails of right hand & feet	—	None	Severe pruritis and rash in inguinal region gone in 3 weeks. Must have had tinea cruris. Still under treatment for nails.
16	48	F	W	Trichophyton mentagrophytes	2½ yrs.	1000	25	25 days	Clinically clear	4th innerspaces of both feet	—	None	—
17	36	F	W	Trichophyton rubrum	7 yrs.	1000	30	30 days	Improvement of Epidermophytosis	Left Hallux nail 3rd & 4th innerspaces	—	None	Treatment discontinued while patient ill. Treatment resumed.
18	32	M	W	Candida albicans	15 yrs.	1000 reduced after 22 days to 500	29	36 days	Epidermophytosis 50% improved.	4th innerspaces, 5th toenails	—	None	Cracking, peeling at outer longitudinal arch after 2 weeks where no symptoms previously. Still under treatment.
19	30	M	W	Epidermophyton floccosum	3 yrs.	1000 reduced after 18 days to 500	25	31 days	Epidermophytosis clinically clear. Nails 50% improved.	Left leg and arm, neck, all toenails	—	None	White lunular line at toenails. Circinate skin lesions disappeared in 3 wks. Still under treatment. Drug supply exhausted.
20	69	M	W	Candida albicans	15 yrs.	500 alternately with 250	23	63 days	Clinically clear	Abdomen, both hands, both feet	1 wk.	Headache, thirst, malaise	Pruritis diminished after 2 weeks.
21	41	M	W	Trichophyton rubrum	18 yrs.	1000	30	30 days	Clinically clear	Inner longitudinal arch bilateral, 4th innerspace bilateral	2 wks.	None	Pruritis diminished in 1 week
22	37	F	N	Trichophyton mentagrophytes	1 wk.	1000	7	7 days	Clinically clear	Interdigital innerspaces	2 wks.	None	Acute with vesicles
23	59	F	W	Trichophyton mentagrophytes	2 wks.	500	14	14 days	Clinically clear	Interdigital innerspaces	2 wks.	None	Chronic ringworm of the rectum with fissures, burning & cracks disappeared in 2 weeks also
24	41	M	W	Trichophyton mentagrophytes	17 yrs.	1000 reduced to 500 after 14 days. Stopped medication for 16 days. Resumed on 500 for 15 days, 750 for 10 days, 1000 to date.	26	56 days	75% improved	All toenails and fingernails of right hand	—	Swollen, lumpy jaw disappeared when medication stopped. Did not reappear with resumption of medication.	Still under treatment. Drug supply exhausted. White lunular lines appeared on toenails.
25	45	F	W	Candida albicans	3 yrs.	1000	42	42 days	Onychomycosis 75% improved. Epidermophytosis clinically clear.	Two big toenails. Hyperkeratosis on both heels	—	None	White lunular lines appeared on toenails. Hyperkeratosis on heels cleared —not previously suspected of being ringworm.
26	40	M	W	Trichophyton mentagrophytes	10 yrs.	100/	25	25 days	Clinically clear	Inner longitudinal arch, bilateral. Between all toes	2 wks.	None	Pruritus stopped in 24 hours.

of a persistent virus infection and the presence also of "morning sickness" of early pregnancy. Stomach cramps diminished by cutting the dose in half. Epigastric distress and diarrhea seemed to disappear after the system got used to the medication. Only one case showed unusual symptoms (No. 24) by developing a swollen, lumpy jaw at the site of a dental bridge after 2 weeks of treatment. This swelling discontinued upon cessation of treatment, and did not return when treatment was resumed.

Contrary to other authorities[12] all five cases of fungus infection with Candida albicans showed improvement with clinical "cure" being effected in two of them (No. 15, No. 20). New growth on onychomycotic nails after oral administration of griseofulvin is indicated by a thin white lunula which just shows itself at first at the border of the epinychium. The lunula grows forward in time until a full, wide half-moon shape has made its appearance. It takes approximately six months for the new nail to shed itself of the old affected nail. In the meantime viable organisms are still present in the old nail as repeated cultures taken at frequent intervals have shown. Undoubtedly, if griseofulvin therapy is discontinued after the white lunular area shows itself, the individual is open to reinfection by the organisms in the old nail after the keratin containing griseofulvin sheds. It is suggested by this author that a patient be maintained on 250 mg. dose of griseofulvin to keep the blood titer elevated about one month after all signs of fungus have disappeared from the body, nails and otherwise.

Although other medication was not used in this study, it is apparent that swifter results would have been accomplished with the help of an effective topical and/or keratolytic agent. A keratolytic would make the epidermis shed faster so that the body would more effectively have rid itself of the keratin containing the "curled" hyphae. Also, possibly complete surgical avulsion of the nails prior to administration of griseofulvin would have allowed griseofulvin therapy to be discontinued sooner. Certainly, as far as toenails are concerned, constant filing or burring is indicated with application of local fungicides.

Of the local fungi which invade the feet, this study showed that Trichophyton mentagrophytes seems to respond to griseofulvin therapy best. It was clinically clear after treatment in 10 out of 12 invasions.

As illustrated in cases No. 8, 15 and 25 of the chart, certain lesions of the feet were treated with oral administration of griseofulvin with other parts of the body responding. These may be called sort of "fringe" benefits of taking the medication; number 8's Tinea capitis cleared up; number 15's Tinea cruris disappeared; and number 25's hyperkeratosis went away. Possibly griseofulvin may be used as a diagnostic agent, when response to its utilization would be pathognomonic of fungus disease.

Summary

The clinical response to these 26 cases of tinea pedis with griseofulvin therapy was dramatic. Duration of treatment of skin lesions on the feet was one to eight weeks depending on the dosage and the severity of the lesion. In the more acute lesions "shot-gun" therapy with one gram of griseofulvin daily will give a clinical "cure" in as few as seven days. Toenails show response to treatment in four weeks with the formation of a new white lunular line at the border of the eponychium, but complete new nail growth takes at least six months.

Some might assume from this investigation, and others, that it is now possible to successfully treat superficial fungus infections through systemic medication. It is still premature to draw a definite con-

clusion as to the complete efficaciousness of this oral fungistatic agent. More studies are required on the dosage schedule, toxicity and post-treatment reactions of griseofulvin. However, to date, griseofulvin shows great promise. We can only hope that additional studies reveal that this is a specific therapy for the elimination of fungus disease in man.

1845 Summer St.

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THE CONTROL OF MYCOTIC CONDITIONS OF THE FOOT

NORMAN MATHEWS, B.Sc., D.S.C.
New Westminster, B. C., Canada

In mycotic infections of the foot, most practitioners diagnose and treat in the same manner they would a bacterial infection. They fail to consider that fungus is a plant of a higher order with a more complex reproductive cycle. Because of this attitude, many are not able to cope with all various mycotic conditions they see. In this paper, I will attempt to show the more recent developments in this field. This does not include mycotic nail conditions.

Considering the fungus with this in mind, there are two stages in development. The active stage known as the hypha, and the inactive stage known as the spore, of which there are many forms. When conditions are proper, the spore becomes activated to produce a hypha, which by budding gives rise to more hyphae. A mass of hyphae are known as mycelia,[4] which in turn produce spores. Under appropriate conditions a cycle is established.

When there are rapid changes in the environment, the active stage (mycelia) dies and the inactive stage (spores) remains. The spores are very resistant to unfavorable conditions and may reactivate years later.[1]

Fungi thrive in a warm, moist, alkaline media.[2] The perspiration of the foot is alkaline and moist. The foot being encased as it is in a stocking and shoe is warm. Perspiration tends to cause maceration and breakdown of the skin. The effects of maceration are aggravated by friction between adjacent toes. Maceration also lowers surface acidity of the skin and predisposes to both bacterial and mycotic infection.[3] The spore can now become

active and the cycle is again activated. This is the start of an active fungus infection.

Treatment

Most commercial fungicidal agents utilize some form of an acid which will inhibit the mycelia of the active fungus. However, since the skin of the foot still perspires and continues to be macerated, the condition recurs as soon as the effect of the acid wears off. In many cases also the acid will have little or no effect on the mycelia.

From a therapeutic standpoint it is immaterial whether the organism responsible for the mischief is Epidermophyton, Trichophyton or one of the yeast organisms such as Monilia albicans.[4] We should not be attempting to destroy the fungus, but to inhibit it. This is done by treating the skin, the environment on which the spore develops.

This environment must be changed to one in which the mycelia cannot grow and the spores will not become activated. A dormant or inactive spore is no more harmful than usual bacteria found on the skin or in the mouth. Once the fungus is inactive for a period of time, the skin on the foot will return to a healthy state. Following this, prophylactic measures must be instituted.

A suggested regimen is:

1. The patient is to use aluminum acetate soaks t.i.d. for periods of twenty minutes. This is to bring pH of the skin back to normal, about 4.5.

2. At night the patient applies Acid Mantle Cream®[1] to his feet. This augments the soaks in bringing about a return to normal pH.

3. The patient is directed to apply a foot powder to his feet after soaks and dust powder in his stockings. This is to absorb and reduce perspiration, minimizing the production of maceration.

4. Once the burning and itching sensations have disappeared, Panthoderm®[2] Cream is substituted for the Acid Mantle Cream. This will assist the skin to return to a healthy state since the pH is now normal.

5. When the skin appears normal, the soaks and cream are discontinued, but the powder is continued as a prophylactic measure. The patient is to wear cotton or light weight wool stockings during and after treatment. He must not wear nylon as it will not absorb perspiration. Nylon hose with cotton feet are obtainable for women.

Recently a new oral anti-fungicidal agent, Griseofulvin®[3], has been developed. Its potential is very encouraging, especially for resistant fungus cases of long standing.

Comment

There seems to be no doubt that at one time or other, all feet come in contact with fungus. To attempt to prevent this contamination by such means as foot baths in swimming pools or sanitizing shoes appears doomed to failure. The mycotic spores are always present. The important measure is to keep the environment or media non-conducive to growth.

604 Columbia Street

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®[1] Dome Chemicals, Inc.
®[2] U. S. Vitamin Corp.
®[3] Schering Corp., McNeil Laboratories, Inc.

"Censure is the price a man pays to the public for being eminent."
Benjamin Franklin

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A. RUBIN, D.S.C., Editor

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PRESIDENT'S PAGE

PROVIDING BETTER AND MORE COMPLETE FOOT HEALTH SERVICES. The development of our practice acts has been phenomenal, when we consider the short space of time that has passed from the enactment of the first laws governing our practice to the present day, when all states have laws, nearly two-thirds of which enable us to practice to the full extent of our training; when medical service plans are beginning to acknowledge the rightful place of the podiatrist-chiropodist in their programs; when we realize that through the dedicated efforts of individuals and state societies these programs are rapidly expanding, having its effect felt throughout the nation.

LIAISON WITH FEDERAL AND STATE AGENCIES. It is important that you are reminded of the many developments in federal and state programs affecting the nation's foot health. This past year we have participated in nearly two hundred pilot surveys in thirty states as part of the President's Youth Fitness Program. This must be continued and broadened. Your national organization is now a participating member of the government's Geriatric program. We must extend our efforts in the field of the aging and the health of the aged. This is another example of a major opportunity that we have to be of invaluable service. Nearly every community in America has committees on aging now being organized. They will welcome our participation.

MARVIN W. SHAPIRO, D.S.C.

PUBLIC EDUCATION INFORMATION

(Editor's Note: Periodically this section will provide information of assistance to the individual and to affiliated societies in the area of Public Education Information.)

UTILIZING YOUR STATE AGENCIES TO AUGMENT PODIATRIC PROFESSIONAL RELATIONS PROGRAMS

RAYMOND K. LOCKE, D.S.C., F.A.S.C.R.*
Englewood, N. J.

In the course of a presentation during New Jersey Diabetes Detection Week, Milton Caster, D.S.C., of Trenton, New Jersey, exhibited the film—"The Chiropody-Podiatry Clinic in Hospital Routine" filmed at Hackensack Hospital, Hackensack, New Jersey. This motion picture, produced and directed by the author, made on a grant from Merck Sharp & Dohme, has received wide attention, having been projected during the recent trip by Marvin Shapiro, D.S.C., in Great Britain, France and Russia where, as indicated by his report, it was received warmly.

Most recently, the Ambassadors of Great Britain, France and Russia received this film, along with various texts and the strip "Johnny Sorefoot" for the medical libraries of their respective countries.

Reproduced at the end is a letter from the Department of Health of the State of New Jersey. Through this agency, excellent professional relations may be achieved on behalf of our profession.

One of the best forms of public relations, on the professional level, is through the media of motion picture, which depicts various techniques and the special skills of podiatry-chiropody as employed in hospital routine. This situation is augmented by the fact that the Department of Health of the state assumes the distributorship and promotion of this film. This letter was sent to various state institutions, visiting nurse services and other similar groups throughout the State of New Jersey. It is published, herewith, in order to stimulate and activate similar action by A.P.A. members and state and divisional societies in bringing this film to the attention of the health authorities in their respective states and/or cities so that a similar program to that illustrated, herewith, may be initiated.

It is urged that similar action be taken by individual members of the American Podiatry Association and their state and divisional groups citing, as an example, the action taken by the New Jersey Department of Health.

The following is another example of sponsorship of public relations on our behalf by a State agency. Recently, the author had occasion to present a scientific exhibit before the Indiana State Medical Convention in Indianapolis. The Indiana State Podiatry Association was also represented by an exhibit in the scientific section of this meeting, a most admirable and commendable action and the best I've seen yet emanating from any state group. Across the aisle from the author's exhibit, the Indiana State Department of Health sponsored a scientific exhibit in which a motion picture was shown on dental health, in continuous projection. Thus, through the effort of a third party, in this case the State Board of Health, the story of Dentistry was told most effectively to the medical profession. The impact might have been even greater if the State Board of Health had also sponsored a similar film such as we now have to offer. This experience is cited in order to point out an

*Chief of Podiatric Service, Riverdell Hospital, Oradell, N. J. Director of Research, Ohio College of Chiropody

effective means through which a similar rapport may be gained in medical, nursing and allied fields, through the media of sponsorship by official or quasi-official state, county and municipal agencies through the use of our motion picture or other visual aids available from the A.P.A. Should such sponsorship not be forthcoming, the second choice should, of necessity, be that of an exhibit by the local, state or regional podiatry-chiropody association.

Copies of the film — "The Podiatry-Chiropody Clinic in Hospital Routine" may be obtained either on loan to the various state agencies or by direct purchase by the state podiatric groups or governmental agencies for their film libraries.

Illustrated booklets containing a full narration of the film are available without cost for each showing in adequate quantities to supply the needs of each showing. Wider use of this film and our other audio visual material will enhance our professional public education programs.

142 Engle Street

State of New Jersey
DEPARTMENT OF HEALTH
Trenton 25

The New Jersey State Department of Health has purchased a film entitled "The Chiropody-Podiatry Clinic in Hospital Routine." It is a 16 mm color-sound film with running time 22 minutes. The film is suitable for professional audiences including physicians, nurses, and others associated with diabetic patients. A number of foot ailments in diabetic patients, and their local management in an out-patient Chiropody Clinic are demonstrated.

The film is available without charge from the New Jersey State Department of Health. Loan of the film for showing can be arranged by completing the attached form and returning to:

Administrative Services
N. J. State Department of Health
145 West Hanover Street
Trenton, New Jersey

It is suggested that requests for this film give at least two (2) alternate dates, preferably one week apart, in order that bookings can be filled. A descriptive brochure concerning the film is available.

Very truly yours,
Arthur Krosnick, M. D.
Coordinator
Diabetes Control Program

AK: ic

I would like to reserve the film "The Chiropody-Podiatry Clinic in Hospital Routine" for showing on the following date:

Alternate dates: _____ or _____

Name _____ Organization _____

Address _____

PUBLIC EDUCATION IN THE PODIATRY OFFICE

ROBERT H. ARMSTRONG, D.S.C.
Seattle, Wash.

Much has been written and said of the value of good public relations to our profession. There is little question that this pertains largely to efforts outside of our individual offices. We often hear from learned men, however, that public relations actually begins in the office. The purpose of this paper is to show one way in which this thought can be developed successfully. This "one way" is in reference to further education of our patients other than that which they normally see or hear in the office. It goes without saying that a clean, modern office with proper diagnosis and treatment is also a major part of public relations. The discussion of this last important factor, however, is not the purpose of this paper.

Many times our patients will be waiting either in the reception room, treatment room, or office with nothing to do but read magazines. Many times our patients will be in the treatment chair having treatment, when little or no conversation exists. Many times our patients ask good intelligent questions pertaining to foot health when it is difficult to answer them properly because of the time element which is such an important factor in the business part of our profession.

These are conditions where full advantage should be utilized to educate our patients. These are the golden moments when we have the opportunity to utilize public relations.

It is quite obvious that this is impossible to do by conversation or to achieve through reception room pamphlets. Even though many of these pamphlets that are available in quantity are excellent, they simply do not cover all possibilities in the proper detail. Also, many may not convey the meaning you wish imparted to your patients or that fits in to your particular type of practice. Another observation has been that the patients do not pick the best pamphlet for their particular condition and often don't read them if they do get the proper one. This is possibly because they haven't been encouraged to. However, I do believe in the limited value of these pamphlets, and do have them in my own reception room.

The thought for best utilizing these precious moments is in the formation of a loose leaf binder of your own. This would be a collection of newspaper, magazine, and pamphlet articles which would be attractively arranged in a rich-looking binder with the articles protected indefinitely by thin plastic covers. It would be something that is most impressive when handed to the patients. It is something that not only would help explain the patients' specific questions, but also would expose them to the other articles it contained. It is something that could illustrate the improvements in our profession, educational background, and call attention to some of the conditions we treat of which the patient may be completely unaware.

It is something that can indirectly expose a new patient to a podiatrist's full potential even though she may enter the practice just to have "that corn and callus trimmed," and have a generally negative attitude towards the value of proper foot care. It is something that could explain questions such as "what is ultra-sound" or "what causes athlete's foot," with a minimum of effort on the doctor's time, and probably better than he could (even though he may wish to add a few words himself). It is something that impresses the patient because most people believe everything printed in newspapers and magazines. This is one advantage over the pamphlets, which some people may construe as "propaganda." It is something where the thought of a "picture is worth 1,000 words" can be utilized. For example, pictures showing before and after treatment, or illustrations depicting an attractive female with a pained facial expression and poor posture because of sore feet. It is something where you could state a few "practice policies" in the beginning, if you desired. Explanations on insurance matters, collection policies, and conditions we treat are some of the possibilities.

In short, this is a method of imparting to your patients some of the things which we think they should know (or wish they knew). It helps eliminate the embarrassing question of "Oh, do you treat that?" and "Why do you go to school so long?"

This is a project that will take time and effort to accomplish. Unless you have been collecting articles, you will find it will take months to find enough material to properly form this binder. However, it is also something that can be easily changed and modified at any time.

Helpful suggestions:

1. Purchase a good and attractive binder with at least 6 rings and one that is made for limited page content. You will probably use 10-12 pages. If you have many more than this the patient will tend to "skim through it."
2. Collect several copies of each article you use. You will want several binders, eventually.

3. Don't place articles too close together. It detracts from their impact.

4. Secure articles to the black paper background sheets with a short strip of double sided scotch tape. Rubber cement will wrinkle and discolor the plastic covers in time.

Conclusion:

A method of public relations for our personal patients has been presented. This consists of a loose leaf binder containing hand-picked subjects on Podiatry. It is a way in which our patients' office time is effectively utilized for informative Podiatry education rather than wasted on the reading of irrelevant popular magazines.

409 General Insurance Building

FORTY-EIGHTH ANNUAL MEETING
DRAKE HOTEL
CHICAGO, ILLINOIS
August 25 to 30, 1960

DID YOU EVER HAVE FEET WITH YOUR BREAKFAST? NO? Well you will have the opportunity to try it at the "Instructional Breakfast Courses" your Scientific Committee is cooking up for you at the Convention in Chicago in August. This means that from 7:30 to 9:00 A.M., breakfast will be served while you learn about such subjects as "Diagnoses" from H. V. Svien, M.D., "Surgery" from Doctors DuVries, Mowbray, Pickett, Suppan, and Brennan, and "Orthopedics" from Doctors Staack, Larimer, Frost, Guenzler, Meldman, and Henn. These outstanding people will not only feed you knowledge, but make you "WAKE UP AND TAKE NOTICE." Be sure to register early as space will be limited at these sessions. The next issues of the JOURNAL will inform you of the exact programs.

Of course, the Scientific Committee has been lining up more formal lectures as well; for instance, here is an interesting one: "In-Toeing and Out-Toeing of Children" to be presented by Carlos Scudieri, M.D., Philip Brachman, D.S.C., and H. Sofield, M.D. Interested in "Peripheral Neurological Manifestations"? The subject will be presented by Joseph P. Cascino, M.D., and H. K. Svien, M.D. In another area of interest, R. Hawkins, D.S.C., R. E. Tanner, D.S.C., and Angelo Creticos, M.D., will have as their subject, "Peripheral Vascular Diseases."

Although the programs are not yet completed, your talented Committees have been hard at work getting out the best subjects and speakers for your edification; almost every phase of our profession will be covered. Along with Social Programs for the entire family, the President's Reception and Inaugural Banquet, this Convention in Chicago will be a memorable one, one that you will not want to miss.

SEE YOU IN CHICAGO IN AUGUST!

PHARMACEUTICAL PREPARATIONS FOR THE PROFESSION

HARRY L. HOFFMAN, Ph.G., D.S.C.
Chairman, Council on Podiatry Therapeutics and Pharmacy

A column devoted to preparations, new and old, with emphasis on their value and uses in everyday chiropody practice. This is a regular monthly column prepared from information furnished by the pharmaceutical house. We invite questions, which we shall endeavor to answer, or obtain the answer.

Carbrital Kapseals

Composition: White No. 1 and No. 4 capsules with blue band. Each Kapseal, full-strength contains: carbromal, 4 gr. and pentobarbital sodium, 1½ gr. Each Kapseal, half-strength contains carbromal, 2 gr. and pentobarbital sodium ¾ gr.

Action and Uses: For oral administration to obtain hypnotic action of pentobarbital sodium and sedative effect of carbromal. Depending on dosage used, Carbrital Kapseals rapidly induce either sedation or quiet restful sleep, from which the patient awakens refreshed and alert.

Administration and Dosage: One (1) or more Kapseals as indicated.

Also Available: Carbrital Elixir, each fluidounce represents 6 gr. carbromal and 2 gr. pentobarbital sodium and 18% alcohol. This is especially useful in pediatric practice. Adults 1 teaspoonful, children ½ to 1 teaspoonful of Elixir.

Supply: Carbrital Kapseals, in bottles of 100 and 1000. Carbrital Kapseal (half-strength) in bottles of 100 and 1000.

Elixir in 16 fluidounce bottles. By Parke, Davis and Company, Detroit 32, Michigan.

Hyptran Tablets
Hypnotic-Tranquilizer

Composition: Each dual-release tablet contains, in the outer layer for immediate release, Phenyltoloxamine Citrate 25 mg. and Secobarbital 60 mg.; in the delayed release inner core, Phenyltoloxamine Citrate 75 mg.

Action and Uses: In intense insomnia, Hyptran provides quick sure sleep throughout the night free of disturbing tensions. The outer tablet layer provides an immediate calming dosage of phenyltoloxamine, a mild, non-phenothiazine tranquilizer and short-acting secobarbital quickly brings sleep. The inner core of phenyltoloxamine, released later in the night, controls insomnia-causing anxieties, keeps them from "breaking through" and interrupting sleep. Patients awake calm and clear-headed, refreshed mentally and physically.

Administration and Dosage: One or two tablets before retiring.

Supply: Bottles on 100 sugar-coated pink tablets. By Wampole Laboratories, 35 Commerce Road, Stamford, Conn.

Soma

Indications: To relieve pain, stiffness and spasm in a wide range of acute inflammatory, degenerative and traumatic muscle and joint disorders, such as: muscle stiffness, lumbosacral strain, whiplash injury, bursitis, tenosynovitis, fibrositis, fibromyositis, low back pain, disc syndrome, sprained back, traumatic strains and bruises, postoperative myalgia.

Action and Uses: Soma has unusual analgesic and muscle-relaxing properties. As an analgesic, Soma has unique action, different from salicylates and other pain-relieving compounds now in use. It appears to modify central perception of pain without abolishing natural peripheral pain reflexes. As a muscle relaxant, Soma is about eight

times more potent than meprobamate or mephenesin. Soma is especially effective in counteracting decerebrate rigidity which is not satisfactorily released by the older muscle relaxants. Soma exerts a powerful selective blocking action on interneurons.

Precautions: Toxicity is extremely low. No effects on blood pressure, blood picture, nor on renal, endocrine or hepatic function have been reported. An occasional patient may become sleepy, usually on higher than recommended dosage. This effect ordinarily disappears when the dosage is reduced.

Administration and Dosage: Usual adult dose is one 350 mg. tablet 3 times daily and at bedtime.

Supply: Bottles of 50 white-coated tablets, each containing 350 mg. of Soma. By Wallace Laboratories, New Brunswick, N. J.

Betadine Antiseptic

Description: Betadine Antiseptic is a solution for topical use, containing Povidone-Iodine N.N.D. as the active ingredient. It retains all of the non-selective microbicidal action of iodine without any of the undesirable features or disadvantages heretofore associated with iodine.

Betadine Antiseptic fulfills the requirements for the "Ideal Antiseptic" as long postulated by Dr. Louis Gershenfeld, Professor of Bacteriology and Director of the Department of Bacteriology of The Philadelphia College of Pharmacy and Science and many other researchers of note.

Action and Uses: Kills bacteria on contact (including antibiotic resistant organisms), fungi, viruses, protozoa, and yeasts. Has prolonged germicidal action. Does not irritate the skin mucosa. Active even in the presence of organic matter such as fats, soaps, oils, serum, blood or pus. Is colored to show where it has been applied (color can be removed with water).

Indications: Preparation of skin prior to surgery, injections, aspirations, or intra-articular injections. In emergency treatment of lacerations, abrasions and minor burns. Disinfection of wounds including fractures, bacterial and mycotic infections of the skin, oral moniliasis (thrush), tonsillitis, pharyngitis.

Supply: 8 and 16 oz. bottles; also 3 oz. aerosol spray bottles. By Tailby-Nason Company, Inc., Dover, Delaware.

Vi-Dom-E™ Pillettes

Description: Each small, chewable, spherical pillette contains 50 mg. synthetic vitamin E (dl, alpha-tocopheryl acetate).

Administration: One to six pillettes per day, depending upon the disease being treated.

Indications: Menstrual acne, urticaria and eczema, lupus erythematosus, dermatoses, sterility, habitual abortion, neurologic and neuro-muscular disorders, stasis ulcer, peripheral vascular disease, and vitamin E deficiencies.

Supply: Bottles of 100. Prescription only. By Dome Chemicals Inc., 109 West 64th Street, New York 23, N. Y.

"Success in your work, the finding a better method, the better understanding that insures the better informing is hat and coat, is food and wine, is fire and horse and health and holiday. At least, I find in my work that any success has the effect on my spirits of all these."

Emerson

PODIATRY-CHIROPODY ABSTRACTS

JEROME SHAPIRO, Pod.D.
5429 Connecticut Ave., N.W.
Washington, D. C.

Editors of Local, State and Regional Publications are requested to provide copies to Dr. Shapiro who is editing this section of the Journal.

CASE REPORT OF PERIOSTEAL STRIPPING OF THE TIBIAL MALLEOLUS

R. H. Lanham, Indiana St. Podiatry J. 23: 1958.

A man, aged 48 years, with a diagnosis of osteoarthritis made by an orthopedic surgeon two weeks earlier, came to this office because the swelling around the ankle and dorsum of the right foot had persisted. Twenty years earlier this man had been treated for tylomata of the right first and fifth toes and shortening of the left leg which was accommodated by a 3/8-inch build-up in a balanced appliance. He had suffered a fracture of the right ankle and a fracture of the left femur. The present pain had been felt for the first time when he stepped forward on his right foot while bowling.

Roentgenograms, medial to lateral view, of the ankle and lower leg showed edema and protrusion of the periosteum posteriorly and medially, of the medial tibia, with a typical pedicle formation such as is seen with osteochondromas. There was evidence also of periostitis, non-union of an old fracture, traumatic sprain, or periosteal peeling. Consultation with two other podiatrists confirmed our diagnosis of periosteal stripping of the tibial malleolus.

After ultrasonic application and flexible casting for eight weeks, another radiologic study showed decrease in the size of the lesion, but protrusion of the periosteum remained. Ultrasonic therapy was discontinued and 12.5 mg. of Hydrocortone T.B.A.®[1] and 0.5 cc. 1 per cent Cyclaine Hydrochloride ®[1] were infiltrated dorsally and medially just above the area where the tendon of the extensor hallucis longus inserts into the foot, and anterior to the medial malleolus. Flexible casting was still worn. This treatment was designed to reduce the inflammatory process and reduce any tendency to a residual osteoarthritis. This treatment continued for three weeks brought relief from pain and edema. The day before the patient's last visit he had played 18 holes of golf in complete comfort.

®[1] Merck, Sharp & Dohme

CHIROPODIAL THERAPY IN HALLUX VALGUS

J. Hardy Stirling, F., Inst. Ch., The British Chiropody Journal, 1959.

Hallux Valgus, which the author blames on tapered-toe shoes, can be corrected if seen in its early stages, for in this early stage there is no excess growth of bone The treatment as described consists of heat, massage and manual manipulations followed by traction. The heat and massage relax the muscles and the traction mobilizes the joint, which in most cases is stiff. When the joint is mobilized the next step is correction of the deformity. This is accomplished by use of a Hallux Valgus Day Sling. In conjunction with the sling an attempt is made to re-educate and strengthen the Abductor Hallucis muscle. This is done through the use of a surged faracid current. The active electrode is of the button type and is applied to the motor point of the muscle. When the contraction of the muscle is obtained the current is surged very slowly and the patient is asked to assist the current by attempting to contract the muscle voluntarily. The object behind this is to allow the patient to get the muscle under voluntary control and then exercise daily.

THE TREATMENT OF MYCOTIC INFECTIONS OF SKIN AND NAILS WITH BOROTANNIC COMPLEX

R. R. Suvarna, F.Ch.S., The Chiropodist, Vol. 15, No. 1, Jan. 1960.

The author goes on to state that corn patients with epidermophytosis or onychomycosis treated with a Borotannic Complex. Only very severely infected cases were chosen and only patients who were considered reliable and capable of carrying out the treatment in full were used. All cases were given "pep talks" on the treatment they were undergoing, and where possible cases were selected which had defied previous chemotherapy.

Those patients with epidermophytosis received a bottle containing 30 mls. of the Borotannic Complex. Application was twice daily and after baths or swimming. Of the 20 cases selected 14 showed major improvement after a period of one to three months' treatment, five showed some improvement and one patient showed no change in the status of the epidermophytosis.

Patients with onychomycosis also received 30 mls. of the Borotannic Complex. The patients were seen at monthly intervals. At each visit the nail plate was cut and drilled away as far as possible to expose the underlying nail bed. Application was twice daily and for a period of from six to twelve months depending on the individual case. Of the 19 patients, 12 showed major improvement, five showed some improvement and two showed no change.

BOOK REVIEW

SURGICAL TREATMENT OF BONE AND JOINT TUBERCULOSIS

Robert Roaf, M.A., M.Ch.Orth., F.R.C.S., Robert Jones and Agnes Hunt Orthopaedic Hospital and Department of Orthopaedic Surgery, Liverpool. W. H. Kirkaldy-Willis, M.D., B. Chir., F.R.C.S., Orthopaedic Centre, Nairobi, Kenya. A. J. M. Cathro, M.B., Ch.B., Orthopaedic Center, Nairobi, Kenya. Pp. 137. Illustrations, 100. Price, $7.00. Williams and Wilkins Co., Baltimore, exclusive agents in U. S., E & S. Livingstone Ltd., Edinburgh. 1959.

This monograph is well written. The print and illustrations are excellent and make for easy reading and understanding. The authors first discuss the general considerations and diagnosis of bone and joint tuberculosis. The essential understanding of the phrases "Conservative Treatment" and "Operative Treatment" is defined. The various chapters deal with the Spine, Sacroiliac Joint, Hip Joint, Knee Joint, Ankle and Foot, Shoulder, Elbow, and Wrist and Hand. Within each chapter the diagnosis, pathology, conservative and operative treatments are fully covered.

The role of antibiotics in the treatment of Bone and Joint Tuberculosis and Pott's Paraplegia is also thoroughly considered. In the period following the discovery of antibiotics tremendous advances in knowledge of this disease have been made, especially in methods of treatment. Now direct operative opening of a tuberculous focus is safe. With adequate precaution there is no fear of secondary infection or the spread of the disease.

The regional incidence of the disease in the foot is approximately 2%. As most of us have little or no experience with the post antibiotic treatment of tuberculosis we must, therefore, turn to those with experience in this field of bone and joint tuberculosis.

This is a book that all individuals dealing with Bone and Joints should have in their library.

Robert Shor, D.S.C.

DIGESTS FROM THE LITERATURE

Anyone wishing to read the complete article, if not available in your local library, may borrow it through interlibrary loan. A microfilm may be borrowed from the National Medical Library, Washington 25, D. C., or a photo-duplication may be obtained from that library.

CIRCULATORY DISEASES

Effect of Hyaluronidase on Capillary Permeability, Lymph Flow and Passage of Dye-Labelled Protein from Plasma to Lymph, Szabó, G., and Magyar, S. Nature 182: 377-79, 1958.

The effect of hyaluronidase was investigated by determining the composition and flow of lymph in dogs under hexobarbital anesthesia. After intravenous injection of bacterial hyaluronidase, followed by 0.1 per cent solution of Evans blue intravenously, lymph was collected for three periods of three minutes each, before administering hyaluronidase for four further periods and afterward. Also, determination was made of lymph flow, concentration of Evans blue in lymph and plasma, arterial blood hematocrit and concentration of total protein in plasma and lymph.

The results obtained from these studies indicated an increase of protein and lymph transfer from the capillaries to the extracellular fluid. Although increase of capillary permeability could be detected in all areas studied, the effect of hyaluronidase was of short duration. At the end of the short experimental period there was no significant difference in the relative dye concentrations between treated animals and controls. Thus, a moderate increase of capillary permeability, despite a marked protein leakage, does not necessarily increase protein content of lymph, and perhaps not of tissue fluid. If the protein leaving the capillaries is not excessive, it can be cleared from the extracellular compartment by increasing lymph flow alone, without requiring an increase of protein concentration in the lymph.

The Case Against Vasodilator Drugs in Occlusive Vascular Disease of the Legs, Gillespie, J. A. Lancet 2: 995-97, 1959.

If vasodilator drugs are to be helpful in treatment of occlusive vascular disease of the extremities, they must relieve rest-pain or ischemic skin lesions, by increasing blood flow to the foot. To relieve claudication, they must increase blood flow in the calf. Moreover, the drug's reaction must be localized in the affected limb, have long action and be effective when taken orally. Laboratory studies showed that none of these effects were produced by the vasodilator drugs used. These drugs may even seriously reduce blood flow which is already poor in the ischemic foot. Given orally or intravenously, the drug may cause vasodilatation in various areas because of reduced peripheral resistance.

Since the vasodilators are not helpful in treatment of intermittent claudication, and may even reduce the blood flow, they cannot indicate the response to sympathectomy and have no value as a preoperative test. These drugs are widely advertised and frequently used in treatment of obliterative vascular disease—much useless expense can be saved if these findings are recognized.

DIABETES

Phenethylbiguanide, A New Orally Given Hypoglycemic Agent: Report After Two Years of Clinical Experience, J. Pomeranze, G. T. Mouratoff, R. J. Gadek, and E. J. King. J.A.M.A. 171: 252-58, 1959.

A new synthetic, nonsulfonylurea compound, Phenethylbiguanide (DBI), has proved to be an effective hypoglycemic and

hypoglycosuric agent when administered orally to diabetic patients. An investigation was undertaken to determine the therapeutic dosage, any undesirable side-effects, and any tissue damage after its prolonged use. Glucose tolerance tests indicated that DBI within 3 hours reduces blood sugar level in patients with either mild or severe diabetes mellitus. The drug was used in replacement of insulin in many of these patients. DBI does not produce intermediary metabolic changes as insulin does. How DBI specifically influences the metabolic disorder is uncertain—DBI does not influence blood sugar levels in non-diabetic individuals.

Initially a dose of 50 mg. or less of DBI was given, and the amount of insulin decreased approximately 10 per cent, if good control with insulin was usual. If certain factors prevented adequate control with insulin, the insulin dosage was not altered during initial therapy with DBI. If DBI was well tolerated, the insulin dose was decreased and the DBI dose increased until a maximum of 200 mg. per day of DBI was achieved. In patients receiving insulin and DBI, the criteria of good control were the presence of less than 15 Gm. of glucose in the 24-hr. urine specimens and a fasting blood sugar level of 150 mg. per cent or less. Diabetic patients in whom the disease is stabilized, and who receive DBI only, but consistently, have a negative 24-hr. urine specimen and a 2-hr. postprandial blood sugar level of no more than 200 mg. per cent, or a fasting blood sugar level of less than 150 mg. per cent. Successful management has been maintained in some diabetics for periods up to 24 months. No toxic effects were noted.

Of the group of 206 patients, 110 were successfully treated over the 2-year period with DBI alone and 18 others with DBI and insulin, the insulin being reduced 50 per cent. Secondary resistance to the drug did not occur. An undesirable loss of weight in a few patients was rectified by decreasing the DBI dosage and slightly increasing the insulin. Gastrointestinal symptoms in 53 patients required discontinuance of DBI; this side effect was lessened when the dosage was limited upon first appearance of the symptom, and a more liberal carbohydrate intake allowed.

The results of DBI therapy did not seem to be predetermined by the patient's age, age at diagnosis, known duration of diabetes, nor duration of administration of insulin.

MUSCULOSKELETAL SYSTEM

Fractures of the Anterior Superior Process of the Os Calcis, J. M. Dell, Jr. Southern Med. J. 51: 1161-64, 1958.

This fracture may be caused by either an acute dorsiflexion of the foot, or by an acute equinovarus strain. An oblique x-ray view of the foot is necessary for diagnosis; otherwise the fracture is easily missed. At times the diagnosis is suspected by the radiologist. Often it is necessary to vary the degree of obliquity for exact visualization of the fracture. Some orthopedic surgeons think that an oblique view of the foot should always be made in cases of heel fracture, so that a fracture of the anterior portion of the bone involving the calcaneocuboid joint will not be overlooked.

Twelve patients, aged from 15 years to 35 years, were observed for periods varying from 6 months to 8 years. The treated cases with this fracture healed with a solid bony union; in 2 to 8 months they became asymptomatic. A patient allowed to bear weight on the foot, with the fracture treated as a sprain, can have dire trouble; the fracture being ununited causes severe pain on walking. A case of that type is described. The bilateral fractures on the anterior process of the calcaneus of each foot were treated by strapping, use of crutches, and a short period of immobilization in a cast. When

seen two years later the fractures were not united, and tropic changes were observed in both anterior fragments, as manifested by increased density. Six years after the accident the fracture of the left calcaneus was still ununited. The anterior fragment showed increased density as before, but was improved. The right foot fracture at that time was also ununited and there were definite tropic changes in the anterior fragment.

When a patient is referred for x-ray examination of foot, and complains of tenderness in the foot, the technician, if the radiologist is absent, should search for tender areas. The referring physician often does not realize the potential problems which this fracture, seemingly insignificant, may later present. Treatment should preclude weight bearing for 8 weeks.

Tendinitis Calcarea on the Dorsum of the Foot, Weston, W. J. Brit. J. Radiol. 32: 195, 1959.

No similar case was found in the literature. The entire foot of a soldier suddenly became swollen. Nine years before an exostosis was removed from the dorsum of the foot. A tender swollen area now developed over the scar; the patient's temperature was 101.5 F. Osteomyelosis was diagnosed and heavy doses of penicillin administered. A hard lump was felt at the level of the joint between the intermediate cuneiform and the second metatarsal. X-ray examination showed a calcified area in the soft tissues on the dorsum of the foot at the level of the second tarsometatarsal joint. There was no evidence of bone involvement. Penicillin therapy was discontinued and ultrasonic therapy substituted. The soldier returned to camp on the seventh day. After a busy day a slight swelling was noted. An x-ray film five weeks later showed a well-defined calcified area in the soft tissues.

Subcutaneous Rupture of the Achilles Tendon: A Study of 92 Cases, Arner, O., and Lindholm, A. Acta chir. scand., Supp. 239, pp. 1-51. *Histologic Changes in Subcutaneous Rupture of the Achilles Tendon: A Study of 74 Cases*, Arner, O., Lindholm, A., and Orell, S. R. Ibid: 116: 484-90, 1959. *Roentgen Changes in Subcutaneous Rupture of the Achilles Tendon*, Arner, O., Lindholm, A., and Lindvall, N. Ibid: 116: 496-500, 1959. *A New Method of Operation in Subcutaneous Rupture of the Achilles Tendon*, Lindholm, A. Ibid: 117: 261-70, 1959.

This series of four articles on histologic and radiologic studies and operative treatment of rupture of the Achilles tendon can well be reviewed together, as parts of the same group of patients were used in all the studies.

Of the 92 patients treated, 88 were followed for an average of 6.8 years. The end results following surgery were excellent or good in 79 patients and poor in three. In 6 patients treated conservatively, results were good in only one. Healing does follow conservative therapy, but there is a marked lengthening of the tendon and therefore loss of proper function. The operation should be performed within one week of the injury; if delayed the proximal end of the tendon retracts and scar tissue forms in the gap. However, in some patients operation was performed as late as 8 months after injury, with excellent or good results.

Either silk or stainless wire was used for suturing the tendon in these cases, with equal success; more recently nylon has been used to the same advantage. From the functional standpoint the four operative procedures used were equally successful—simple suture of the tendon; Silverskiöld's plastic repair; grafting with a gastrocnemius flap; grafting with two gastrocnemius rotated flaps. Fixation of the operative scar occurred least often in the

last procedure. The increased breadth of the tendon which always occurs is not preventable. Following operation, the lower leg is immobilized in plaster strapping for 6 weeks. In 4 cases another violent injury occurred in 1½ to 3 months, again rupturing the Achilles tendon. The tendons may not have been entirely healed by that time.

The fact is emphasized that subcutaneous rupture cannot be caused by indirect violence, unless there are degenerative changes existing in the tendon. The degenerative changes cannot be due solely to advanced age; the rupture occurs most frequently in the fourth decade, most often in men, and the precipitating violence is usually mild. In 96 per cent of the cases studied, the patient had participated in some form of sport sometime earlier. Violent exercise might cause disturbances that give rise to degenerative tissues in tendon tissue.

Normally, the Achilles tendon is one of the strongest in the body; a load of 400 kg. is required to rupture this tendon in young individuals, as was shown in experiments on human cadavers. In 74 cases of rupture of the Achilles tendon studied histologically, the tendon tissue in every case showed histologic features of degeneration; the degree and extent differed in various instances. In many cases normal tissue structure was obliterated in parts, with total lack of nuclear stability, and representing a true necrosis of tissue. These changes were distinct even in 12 cases wherein operation and biopsy were performed the day of injury. They were the same if taken 24 hours later, indicating that these lesions were not the result of fragmentation and edema in the ends of the tendons, secondary to rupture. In old injuries, and occasionally in relatively fresh specimens, patches of mucoid degeneration were seen. The older ruptures sometimes showed calcium deposits and conversion of tendon tissues into cartilage. Some inflammatory reaction was invariably present in the tendon tissue, and often regenerative formation of less differentiated connective tissue as well. In fresh cases profuse hemorrhage was present with an accumulation of lymphocytes, but no appreciable inflammatory cellular infiltration of leukocytes into the tendon tissue.

These studies made it clearly evident that the observed changes were not secondary to the traumatic tissue damage associated with the rupture. They confirmed the idea that regressive changes in the tendon tissue are a prerequisite for the occurrence of rupture of the tendon. The inflammatory and regenerative changes are secondary to the traumatic tissue damage, and unrelated to the primary degenerative changes in the tendon tissue. These tissue changes can be used for histologic evaluation of the age of the injury—a matter of interest from the point of insurance claims.

The histologic picture does not afford definite information regarding the cause of the primary degenerative changes. The tissue changes were not of acute necrotic nature, but rather of a necrobiotic change, varying in different parts of the tendon. Possibly the degenerative changes arose from a circulatory impairment.

The roentgenologic changes hitherto reported in the literature following total rupture of the Achilles tendon were not found to be pathognomonic in this x-ray study of 34 patients. A new radiologic sign was noted, deformation of the contours of the distal segment of the tendon due to loss of tone. This is a pathognomonic sign and should serve to establish the correct diagnosis. The authors emphasize, "The changes apparently pathognomonic of rupture of the Achilles tendon are a curving away from the bone of the posterior tendon contour, between its insertion and the upper margin of the calcaneus combined with unimpaired contour and forward deviation of the anterior tendon contour

proximal to the calcaneus." These changes are found in both recent and long-standing cases.

The actual site of rupture was identified roentgenologically in only 14 of 39 cases. But this is unimportant as there is most always involvement of a limited segment of tendon between 2 and 6 cm. above its insertion on the calcaneus.

Use of the two flap method is discussed by Lindholm. He said that the basic principle of the many procedures used is the restoration of tension in the triceps surae muscle, by approximation of the ruptured ends of the tendon to each other, and if possible, to establish complete contact between these ends. In recent ruptures, the method usually used is simple suture of the tendon according to standard principles, with or without adaptation of the sutures in the periphery of the tendon. However, if the ends of the tendon are grossly split, various procedures are in use. If repair has been unduly delayed, a hematoma between the tendon stumps forms a tendon-like tissue which lengthens the tendon and requires correction.

Many of his cases had been treated with plastic repair described by Silverskiöld (1941), in which the sutured tendon site was covered with a rotated flap brought down from the gastrocnemius aponeurosis. But when one patient who had undergone this repair had a second injury causing a second rupture, he found the central part of the gastrocnemius flap had necrotized. In the Silverskiöld procedure, profuse punctate arterial bleeding occurs in this midline. These vessels are important for nutrition of the flap and may be important for healing of the ruptured tendon. A method was devised to avoid damaging these vessels and leaving this area intact. In this procedure two rotated pediculed flaps are brought down from the aponeurosis of the gastrocnemius muscle, avoiding damage to the arteries in the midline of the aponeurosis. In 20 patients the results were excellent in 16 after this operation and good in four. In one case where there was a rupture again the two flaps were torn loose. The tendon was resutured and the suture lines covered with the old flaps; the patient has remained free of discomfort. In one case of inveterate rupture there was a slight degree of fixation of the skin to the tendon. This new method is especially important in treatment of recent rupture of the Achilles tendon.

SURGERY

Bone Peg Arthrodesis of the First Metatarso-Phalangeal Joint, Tupman, G. S. Postgrad. M. J. 35: 583-86, 1959.

This operation is simple, leaves no complications and has a high degree of success. A review of 33 cases is presented of metatarsophalangeal fusion of the hallux, using an intra medullary beef bone as a graft. In these 33 arthrodeses performed on 30 patients (only 4 were males), the bony arthrodesis was sound in 90 per cent, walking was satisfactory, and a painless foot of good shape was obtained. In 3 cases union was doubtful, but one of these patients was entirely satisfied with the results. Investigation indicated that too early resumption of weight bearing was the cause of the failure of union. The period of immobilization must be ten weeks at least.

Arthrodesis is not suggested as a substitute for Keller's operation; it is used where preoperative assessment indicates that the latter would be followed by an increasingly painful forefoot. The interphalangeal joint of the hallux must be fully mobile and show no clinical or radiologic evidence of arthritic changes. The tehnic is fully described. Following the operation, a padded split-below-knee plaster cast is applied, with a hood over the hallux. Sutures are removed at the end of the third week, and a walking plaster applied and not removed for 6 to 8 weeks. The patient is directed to practice exercises to effect efficient flexion of the terminal joint of the hallux.

ORGANIZATION NEWS

Secretaries of local, state, regional, affiliated, subsidiary and other related organizations are invited to submit copy for these columns.

NEW JERSEY

A ten-week lecture course in pharmacology for pharmacists and chiropodists was inaugurated February 29 at Paterson Hospital. The sessions are given nightly from 10:30 P.M. to Midnight through May 2nd. They are sponsored by the New Jersey State Pharmaceutical Extension Service in cooperation with the Passaic County Pharmaceutical Association and the New Jersey Chiropody Society. The Professional Relations Committee of the New Jersey Chiropody Society is chaired by Dr. Burton LeVine. They are designed to provide pharmacists and chiropodists information on the latest advances in drug therapy.

Hudson County Chiropodists' Society

Sister Ouelette, a medical missionary nun from the Solomon Islands in the South Pacific, has been taking postgraduate work in dentistry, obstetrics and chiropody at several hospitals in New Jersey. The Hudson County Chiropodists' Society presented Sister Ouelette with a complete instrument kit at a meeting in the B. S. Pollak Hospital. The presentation was made by Dr. Anthony Grieco to Sister Ouelette, who was introduced by Dr. Sidney Freedman, President of the local group.

INDIANA

The Indiana State Podiatry Association has produced a small leaflet in shades of two colors, which defines podiatry, gives some details of what and how long this training is and lists types of foot disorders podiatrists are called upon to treat. They may be purchased at $4.00 per hundred (5% discount on orders in excess of 1,000) from the Indiana State Podiatry Association, 3752 North Sherman Drive, Indianapolis, Indiana.

Awards for Research Papers

The Wm. J. Stickel Annual Awards
for Research in Podiatry-Chiropody for 1960
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MONTANA

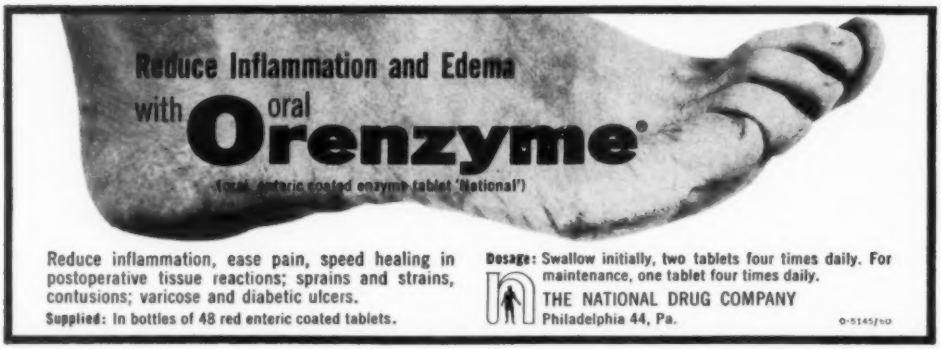
The mid-winter meeting of the Montana Podiatry Association was held in Helena on January 10. Highlight of the meeting was the announcement that the association was accepted for membership in the Public Health League of Montana.

Dr. Louise Berkin, one of the state's senior members, donated a considerable sum to the treasury for the further advancement of podiatry.

OKLAHOMA

The Oklahoma Chiropody Association held a postgraduate course in Tulsa, February 20, 21, 1960, and made final plans for the Southwestern Chiropody Congress to be held June 20-23, 1960, at the Skirvin Hotel, Oklahoma City, Oklahoma. Robert Crotty, D.S.C., of Okmulgee, Oklahoma, presented his technique for making "Moulded Shoes in Your Office"; Duane B. Minor, M.D., spoke on "Differential Diagnosis of Skin Lesions of the Foot and Leg"; Howard H Johnson, D.S.C., of Enid, Oklahoma, spoke on "Recognition of Atypical Gout of the Foot," and C. Parham, D.S.C., Tulsa, Oklahoma, presented the A.P.A. film, "Little Johnny Sorefoot."

The State Board of Chiropody Examiners presented the following: "Past Experiences," S. D. Tomlinson, D.S.C., and F. Trippet, D.S.C.; "Goals and Future Hopes," L. Houx, D.S.C.; "Legal Aspects," Lee Gill, Attorney; "Present Activities," Howard Johnson, D.S.C., and "State Board Problems," Warren Long, D.S.C.



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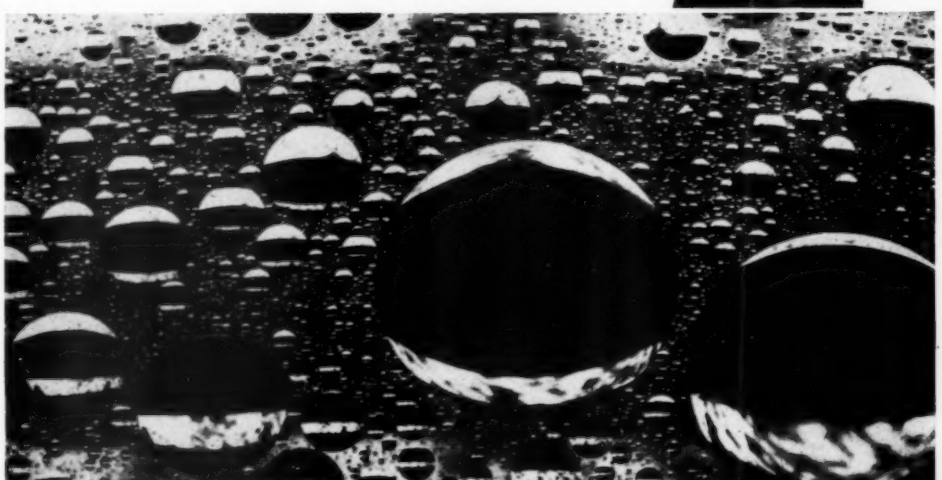

PENNSYLVANIA

Western Division

The Western Division met February 11, 1960, at Roosevelt Hotel, Pittsburgh, Pennsylvania. At the scientific session following the regular business meeting, Dr. W. G. Braun presented Polokoff type padding.

TENNESSEE

At a recent meeting of the Tennessee Chiropody Association the following were elected to office: President, R. R. Scherer, Memphis; Vice President, Donald Skwor, Memphis; Secretary, Ronald Fields, Nashville, Delegate, William S. King, Memphis, and Alternate, W. T. Holt, Knoxville. Committee Chairmen appointed were: Membership, Ralph E. Meece; Vocational Guidance, William S. King; Hospital Affiliation, Bryan H. Niswonger; Insurance, M. D. Krauss; Legislative, Arthur Richert.

APPOINTMENTS

Drs. Albert Pincus of Richmond, Virginia, and T. W. Cockrell of Minot, North Dakota, have been appointed to the Governor's Committee on Aging in their respective states.

Dr. Pierce B. Nelson, Dean of the California Podiatry College, and Dr. Leo N. Liss, Speaker of the House of Delegates of the Association, have been appointed by Mayor George Christopher of San Francisco, to the Mayor's Committee for the White House Conference on Aging.

Committees are being formed in every state which will, through conferences and studies, prepare findings and recommendations relating to their state's problems of the aging. An important part of the program of the 1961 White House Conference on Aging will be developed by these state committees.

Dr. Joseph Matranga of New Orleans, Louisiana, has been practicing chiropody for fifty-three years and still comes to his office every day.

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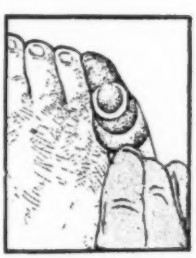

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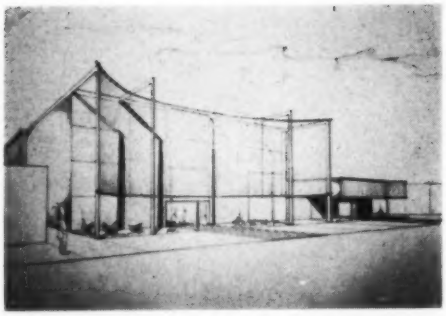
CHICAGO COLLEGE OF CHIROPODY

Formal announcement was made by Dr. Edward P. Durkin, President of the Chicago College of Chiropody, at the Alumni Buffet held during the Midwest Convention in Chicago that the college will sponsor the construction of a general hospital on its campus. The new structure will bed fifty patients and will be staffed with physicians and chiropodists. The services will range from diagnostic to surgical, plus emergency and outpatient departments.

A new corporation has been formed for the fund raising for the $800,000 structure, this not-for-profit corporation to be known as The Chicago General Medical-Podiatry Hospital Fund. Construction will begin as soon as $100,000 has been raised.

The two adjacent buildings to the east of the college which now house the library and dormitory will be razed to make room for the hospital building which will extend into the campus area to the rear. Medical and Podiatry Committees will be named by the Board of Directors of the hospital to control the respective services to see that



Architect's drawing of projected general medical and podiatry hospital of the Chicago College of Chiropody.

the hospital maintains the highest of standards for accreditation by the Joint Commission for Hospital Accreditation. To further meet requirements for accreditation the hospital will have a medical records librarian, pathologist, radiologist, dietitian, clinical and x-ray laboratory facilities and medical library.

Present plans are that the outpatient department and foot clinic of the college will function within the same facilities, but patients will first be screened by the outpatient department receptionist so the patient may be directed to the proper department. Students caring for patients with foot problems which have a systemic relationship will refer the patient to the medical section, assisting in the follow-through.

The hospital will offer hospital facilities to the profession for the full welfare of the patient. Internships and residencies will be set up. Research, postgraduate and advanced studies can be conducted.

The hospital as yet has no name, so that consideration can be given for a memorial name should this interest develop. Contributions are requested, both from our practitioners directly and through contact with people who may be interested in contributing. Checks should be made payable to the Chicago General Medical-Podiatry Fund and forwarded to the college office.

Among other contributions is one arranged through efforts of the students of the college.

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Friday Evening, May 6—Region 3 Open House Party

Dancing to the music of the Joe Stern Orchestra featuring South American Rhythms

Novelty Musical Program by the Aqua String Band, prize-winning unit of Philadelphia's famous "Mummers" bands.

Saturday Evening, May 7—Dine-Dance Festival—West Ballroom—Supper Club Motif

Mystic Interlude—"Kuda Bux—The Man With The X-Ray Eyes"
Internationally known entertainer who has baffled audiences of night clubs, theatres and television.

Annual Region 3 Handicap Golf Tournament

Melrose Country Club, Philadelphia, Pa.

Friday, May 6, 1960.

Calloway Handicap Rating System

2 Trophies for Low Net Scores. 2 Trophies for Low Gross Scores.
Mail name, address and check or money order for $1.00 entry fee to Dr. Anthony R. Grieco, 635 Washington St., Hoboken, N. J.

Women's Progam

Thursday, May 5—"Meet The Girls"—Hospitality Room

Friday, May 6—"Behind the Scenes in Television"—at Station WCAU-TV
Luncheon at the Madison Room of "The Presidential"
Speaker—Donald Lenox, Director Public Affairs, Philadelphia, Pa.

Saturday, May 7—Luncheon at the Sheraton
Guest Speaker—DAVID GUY POWERS, PH.D., ED.D. "Behind Every Great Man"

Special Message and Report

"The President Speaks" — Marvin Shapiro, D.S.C., Toledo, O. President of the A.P.A.-N.A.C. Address and report on the progress of our profession and our national organization.

For complete program book write to Dr. L. M. Lindenberg, 601 Columbia Ave., Lansdale, Pa.

Registration $10.00 Make check or money order payable to Region 3 N.A.C. and mail to Dr. James C. White, Federal & Mills Sts., Milton, Delaware.

WOMEN'S AUXILIARY MESSAGE

The Auxiliary is proud to announce that we now have a new permanent exhibit available to be shipped to the various conventions. The theme is "Life's Foundation—Your Baby's Feet." This has been made available because of numerous requests received from Scientific Chairmen of the various zones. Our first showing will be in Omaha in April at the Zone 6 Meeting, next will be the Zone 12 Meeting in Long Beach in May, then Southwestern Congress in Oklahoma City in June. Should you desire further information about our exhibit, write to Mrs. E. Wirt Dobbs, Public Relations Co-Chairman, 2035 West Alabama, Houston 6, Texas.

On page 336 this issue of the *Journal*, you will find an order blank for our booklets. Have you ordered a new supply lately? When you show "Little Johnny Sorefoot," give each child one of our booklets to take home to his parents.

Remember you and your wife are the best boosters for Podiatry-Chiropody.

THELMA PARHAM, *President*

FIT AFTER FORTY

The public service program, "Fit After Forty," is sponsored by the American Red Cross. Health information for people over forty years of age is provided through classes open to the public. Red Cross chapters in every community have been informed through regional Red Cross publications that our pamphlet, "Foot Care—Some Friendly Advice From Your Foot Doctor," may be made available for distribution to these classes. Members are urged to participate in this public service program by contacting the Red Cross chapter in their community and offering to furnish the required number of these pamphlets which are available as described on page 63 of the Audio-Visual Catalogue. The Red Cross chapters have also been advised that our members are available to give a talk on foot health to these classes.

DEMONSTRATION OF PLASTERING 10 AM. FRIDAY BY DR. KAHLSIUM
WE'LL TAKE THIS LOAD OUT TO THE CAR & GO AROUND A FEW MORE TIMES
3 P. M. DON'T MISS DR. SHEW ON ORTHOPODONTICS MAIN AUDITORIUM
WELCOME VISITING DOCTORS
HAVE YOU TRIED SALVY?
SHOES
TAKE ONE HOME
TIED COMP
EDI-REX FOOT POWDER
SEE DRIKO
TRY HAMMER

Information and ideas are not as easily come by as samples, but your National, Regional and State Meetings are Supermarts of Information. Keep your practice well stocked with ideas.

!!! **Largest Podiatry Convention in California** !!!

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Scientific Presentations **Teaching Exhibits** **Recreation and Entertainment**

PROGRAM

Human Relations Factors for the Podiatrist	Charles M. Simmons
Success for the Podiatrist in 1960	Charles M. Simmons
A New Method of Forefoot Restoration by the Podiatrist	Sherwin Levy, D.S.C.
Your California Podiatry Association Today	Wm. F. Eads, D.S.C. George A. Shore, D.S.C.
Your American Podiatry Association Today	Marvin Shapiro, D.S.C. Robert Shor, D.S.C.
Podiatrists Insurance Program	Mr. Zimmerman, A.P.A.
Complete Casting Techniques for the Podiatrist	David Jacobson, D.S.C.
Modern Management of Podomycosis	Raymond Locke, D.S.C.
Progressive Weight Bearing Changes of the Patient Under Podiatric-Orthopedic Management 1959 Gold Medal Award For Research In Podiatry	W. A. Pepin, D.S.C.
Foot Surgery	Dale Austin, D.S.C.
Anesthesia and the Podiatrists	Theo J. Frye, M.D.
Foot Surgery	Capt. Miller, M.D., U. S. Navy
The Art of Podiatry Practice	Gordon R. Tobin, D.S.C.

REGISTRATION: MEMBERS $35.00 **AUXILIARY MEMBERS $20.00**

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WESTERN PODIATRY CONGRESS REGION 12

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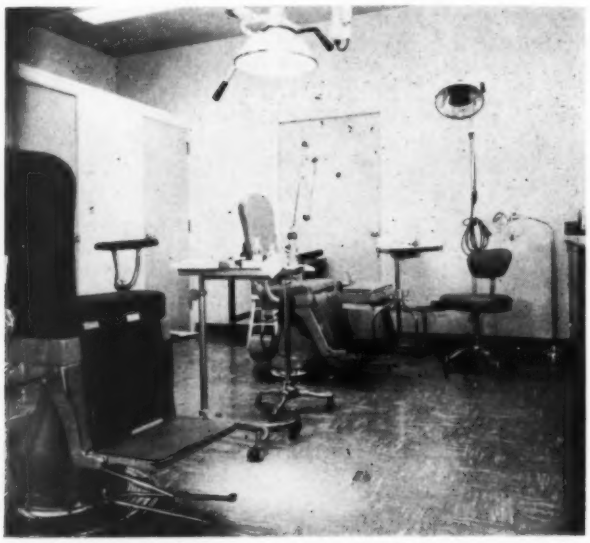
Suite 607-610, Security Bldg., 110 Pine Ave., Long Beach, California

HOSPITAL SERVICE NEWS

THE FOOT CLINIC OF THE HIGHLAND-ALAMEDA COUNTY HOSPITAL

This clinic, or department, is located in the new million dollar clinic building of the Highland-Alameda County Hospital in Oakland, California, a 483-bed hospital with adjoining four-story clinic building and emergency hospital, and separate 750-seat auditorium, all completed in early 1959. All of this is located on a beautifully landscaped slope of 14.3 acres in the center of this city of 480,000 population, and serving Alameda County with a population of 900,000.



The Foot Clinic. The track for the dividing curtain is visible at upper left corner. The two doors at the left lead from dressing rooms to the far treatment area. Counter and windows overlooking garden are just off illustration at right.

The foot clinic is located on the second floor opposite the County Medical Association Library. The main waiting room and registration desk is on the first floor. Each floor has its own re-appointment and assignment station. In the department, as one enters the corridor, are four doors to individual dressing rooms with front and rear doors. Patients prepare themselves for treatment here.

The treatment room is a large room with large windows overlooking a beautiful sunken garden, with green shrubs and rotating blooming flowers to give color all year long. The treatment area is done in cream color with white acoustical tile ceiling and vinyl floor tile. Along the window side is a counter with Formica top extending the full width of the room. Hot and cold water are available at a counter sink. Beneath the counter are ample drawers and cupboards for storage.

There is an eight-foot sliding curtain down the center of the room, dividing the treatment area into two equal parts, with each having two dressing rooms at the rear.

Each operating area has a coral-colored motor-driven podiatry chair with operating stool, stainless Mayo table, and a large Castle operating light. A cord drill is available to either chair. A portable fluorescent X-ray viewing box is also provided. Sufficient instruments, dressings and linens are provided for the operators. There is a partition at one side separating an area six feet wide with counter to do lab work and a full storage closet at one end. Available for use when necessary are apparatus for low voltage therapy and cautery. A unit for taking color photographs of cases is also available.

Patients, when indicated, are referred to laboratory, X-ray, and other departments for study, or to any of the medical departments for work-up or further treatment.

The foot clinic was instituted in 1952, after consultation with our capable Medical Director, G. Otis Whitecotton, M.D., and the then orthopedic resident, Harold Eisenberg, M.D., who felt that the chirop-

odist would ease the load pressure of the orthopedic house staff. Dr. Eisenberg communicated with Harold Burkhead, D.S.C., who was then and is now practicing at the local Veterans Hospital. The writer and Dr. Burkhead set up the clinic in the old building with equipment borrowed from the California College of Chiropody and received patients on Wednesday mornings. The foot clinic grew and soon patients were being booked three mornings a week.

The Constitution and Bylaws of the Visiting Staff of the Alameda County Institutions was amended to provide for chiropodists by adding this section: "Chiropodists shall practice in the Highland Clinic under the Orthopedic Division of the Visiting Staff. These chiropodists shall be graduates of an approved college of chiropody, legally licensed to practice in the State of California and members of the National Association of Chiropodists and its affiliate, the California Association of Chiropodists."

The chiropody staff has complete autonomy of the foot clinic, making use of consultation when necessary. We are permitted to do foot surgery, if the patient can be kept ambulatory since there is a shortage of hospital beds. Surgery cases are required to have medical work-up by the Orthopedic Department. We are doing nails, tenotomies, condylectomies, benign tumors, etc.

There is a nurse's aide assigned to the department at all times. The aide prepares the patient, trims minor nails and uses the nail drill, applies dressings, keeps sharp instruments and medications available at all times. The aide takes the patient's chart to the desk and sees that the patient is reappointed. A Registered Nurse is always available for any assistance needed.

Appliances are prescribed and are made by arrangement with the California Podiatry College appliance department.

Ten patients are booked per morning session three days a week. Emergency and re-dressings are added to this schedule when necessary. The demand on the department

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are only completely
successful
when each case
is individually studied, diagnosed
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special requirements

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originator of foot balance inlays is directed in all its endeavors to accomplish this result

is constantly increasing and it becomes more difficult to get staff replacements. It is hoped that in the near future a Resident-Internship program will be set up so that we will have the foot clinic manned five days a week. The visiting staff will supervise the Resident, and will be able to study and follow cases more thoroughly. The Resident will be a graduate approved by the Hospital. It will afford him an opportunity to gain invaluable experience prior to entering private practice.

The total number of clinic visits to the Out-Patient Clinic of Highland-Alameda County Hospital in 1959 was 154,810. There were 1,258 visits made to the Foot Clinic for the same period.

The present staff consists of the following chiropodists: Frank Fields, D.S.C., Charles Ormond, D.S.C., Lloyd Pereria, D.S.C., Jack Sanders, D.S.C., Ruth Wood, D.S.C., Howard Wright, D.S.C.

The Medical Fee Fund purchased our first motor chair and lamp. All money collected by the hospital for medical services rendered by members of the staff (who receive no remuneration) is placed in the Professional Fee Fund. The money is used for research and other items that cannot be budgeted. The Committee of the Fund authorized some $1200 which paid for equipment. The other equipment was asked for via the Annual Budget and after meeting with a few committees we were successful in getting another $1500 in County Funds for our Department.

CHARLES S. ORMOND, D.S.C.
Oakland, California

"We little realize the number of human diseases that are begun or are affected by worry."

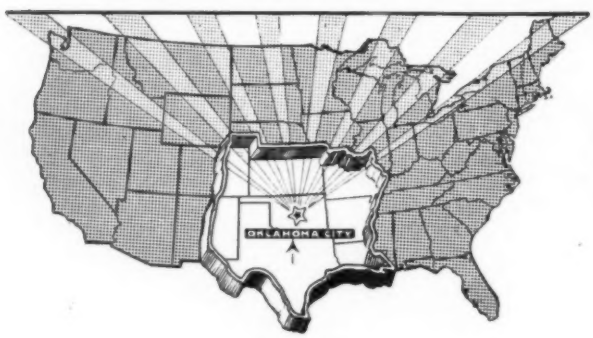
—Dr. Walter Clement Alvarez

Moral: Don't worry.

Southwestern Chiropody Congress

Invites you to attend their 1960 Convention

Oklahoma City, Okla. — SKIRVIN HOTEL with its



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If you change your address please notify THE JOURNAL at least six weeks before the change is made. Include the address clipped from the envelope of your latest copy of THE JOURNAL, being sure to clearly state both your old and new address. If your city has Postal Zone Numbers, be sure to include this Zone Number in your new address.

DEATHS REPORTED

Isaac Hoffman
Quincy, Illinois

Dr. Hoffman died at the age of 80 in Blessing Hospital, Quincy, Illinois. He practiced chiropody for more than 40 years in Quincy. He became a Life Member in 1957 and was an Honorary Member of the American Podiatry Association. Dr. Hoffman was a graduate of the Illinois College of Chiropody.

Theresa O'Brien Messett
Philadelphia, Pennsylvania

Margaret Quinn
Philadelphia, Pennsylvania

Ben Schlack
Detroit, Michigan

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We strongly recommend it for those suffering from Arthritis, Circulatory or Diabetic conditions. Also for bony, rigid and sensitive feet as well as for Verruca, Ulcers and Scar Tissues. It also is made in an inlay type without crest.

The **ORIGINAL CONTOUR** is retained at all times.

A negative or positive Cast at right angle is necessary.

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CONVENTION DATES AND MEETING NOTICES

American Podiatry Association
Chicago, Ill., Aug. 27-30, 1960
Drake Hotel
Seward P. Nyman, Convention Manager
3301 16th St., N.W., Washington 10, D. C.
Michael I. O'Connor, Exhibit Manager
428 E. Preston St., Baltimore 2, Md.

Region One
(Conn., Maine, Mass., N. H., R. I., Vt.)
Hartford, Conn., Oct. 21-23, 1960
Statler Hilton Hotel
Dr. Edward H. Buchbinder
10 Allyn St., Hartford, Conn.

Region Two
(New York)
Mr. Gilbert Hollander, Ex. Sec.
353 W. 57th St., New York, N. Y.

Region Three
(Del., Md., N. J., Pa.)
Philadelphia, Pa., May 5-8, 1960
Sheraton Hotel
Dr. B. C. Egerter, Gen. Chairman
507 Liberty Ave., Pittsburgh, Pa.

Region Four
(Ohio)
J. Edwin Farmer, Ex. Sec.
Fifty W. Broad St., Columbus, Ohio

Region Five
(Ill., Ind., Mich., Wis.)
Dr. Ralph M. Ticko, Pres.
536 W. Wisconsin Ave., Milwaukee, Wis.

Region Six
(Colo. Iowa, Kan., Minn., Mo., Nebr., N. Dak., S. Dak.)
Drs. Harold G. Wieseman and Ken C. Nielsen
640 City Natl. Bank Bldg., Omaha, Neb.

Region Seven
(Idaho, Mont., Ore., Wash., Wyo.)
Sun Valley, Idaho, Sept. 7-11, 1960
Challenger Inn
Gordon R. Tobin, Convention Chairman
153 Third Ave., North, Twin Falls, Idaho

Region Eight
(D. C., N. C., S. C., Va., W. Va.)
Washington, D. C., Nov. 11-13, 1960
Shoreham Hotel
Charles Turchin, Chairman
818-18th St., N.W., Washington, D. C.

Region Nine
(Florida)
Jacksonville, Fla., June 9-11, 1960
Robert Meyer Hotel
Clyde R. Huston, Ex. Sec.
5625 Commerce St., Jacksonville, Fla.

Region Ten
(Ala., Ga., Ky., Miss., Tenn.)
Atlanta, Ga., Oct. 7-9, 1960
Dinkler Plaza Hotel
Dr. Paul Lefkoff, Secretary
202 Burdine Bldg., 849 Peachtree St., N.E., Atlanta, Ga.

Region Eleven
(Ark., La., N. Mex., Okla., Texas)
Southwestern Chiropody Congress
Oklahoma City, Okla., June 20-23, 1960
Skirvin Hotel
S. D. Tomlinson, Gen. Chairman
3101 Classen Blvd., Oklahoma City, Okla.

Region Twelve
(Ariz., Cal., Nev., Utah)
Western Podiatry Congress
Long Beach, Calif., May 27-28, 1960
Lafayette Hotel
Dr. Alfred G. Roos
209 Post St., #412, San Francisco 8, Calif.

American Academy of Chiropodists
Canadian Podiatry Association
Joint Meeting
Toronto, Ontario, Canada, Oct. 23-24, 1960
Royal York Hotel
Dr. Charles E. Kelley
2488 Lee Rd., Cleveland Heights, Ohio
Dr. L. Hurwitz
3017 Bathurst St., Toronto, Ont., Can.

Chiropody Society of West Virginia
Parkersburg, W. Va., June 10-12, 1960
Chancellor Hotel
Malcolm P. Iams, Chairman
716 Juliana St., Parkersburg, W. Va.

Ohio Chiropodists Association
Cincinnati, Ohio, May 19-21, 1960
Sheraton-Gibson Hotel

Attend Your

STATE & REGIONAL MEETINGS

THEN YOUR NATIONAL

IN AUGUST 1960

IN CHICAGO, ILLINOIS

MOOD ELEVATORS

Contributions to this column are more than welcome. In fact it depends upon them.
A.O.P.

The behavior of some children suggests that their parents embarked on the sea of matrimony without a paddle.

Now that grocers in some cities are allowed to sell aspirin they ought to stock it near their cash registers for the use of the customers when their total comes up.

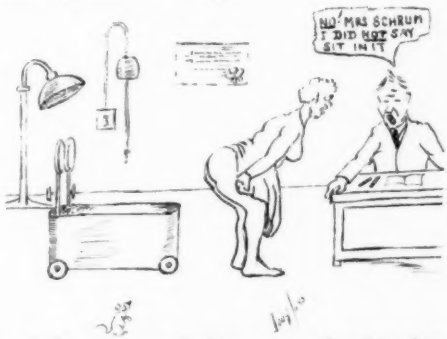
First Guy: "What makes you think your wife is getting tired of you?"

Second Guy: "She has been wrapping my lunch in road maps!"

Keep smiling. It makes everybody wonder what you've been up to.

The boss was fit to be tied this morning. Just beneath the "THINK" signs he had put up some wag had added "OR THWIM."

Strength of mind: The ability to eat one salted peanut and stop.



A farmer was feeling sorry for his dog. "What's the matter?" asked a friend. "He got his tail cut off." "Oh, too bad, that will spoil his carriage." "I don't know about his carriage," said the farmer, "but it'll sure spoil his waggin'."

LIGHTWEIGHT!

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Quite a financier.

Prospective father-in-law: "And how much income do you have to support my daughter?"

Young Man: "About $5,000 a year."

"I see. Then with her own private income of $5,000—"

"I've counted that in."

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for showing to grades 1 to 3 — Teaches the youngsters about foot health. Kit contains film strip in cannister, teacher's manual, 50 take-home foot health cards, suggestions for distribution. Order from Washington office —each kit $2.50. Additional cards available at cost. This film strip is composed of 30 frames in color with titles on Foot Health. Produced and Distributed by Audio-Visual Council, American Podiatry Association on a grant-in-aid from Foot-So-Port Shoe Co.

TAKE FIVE

with
DR. POD

Doc Friendly down the street says about his new sports car and the matching jazzy cap that he has taken to wearing, "I just got tired of my conservative ways and decided to let my true character emerge." Mary Friendly has another version. She says, "Have you seen Charlie in that silly little car of his?"

Science assures us that the life span has increased thirty-two years since 1800. If this keeps up we might all have time to get our taxes paid.

Dr. Bob Swenson says that the easiest thing in the world is to give up smoking. "Why," says Bob, "I give up the weed completely every two or three weeks."

My wife wants to know where are we going to get all the compact people for the new compact cars?

A recent speaker at Kiwanis made a statement that we might all remember. It goes like this. "He who all wrapped up in self make mighty small package."

Doctor Al, who in addition to being a very fine podiatrist is also a rancher, reports that a lady visitor asked him why a certain cow had no horns. Dr. Al replied that some cows were too young for horns, some had been de-horned and some of the rangy ones had knocked the horns off rummaging around for fodder. The reason that particular cow has no horns, however, says Dr. Al, is that it is a horse.

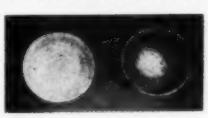
"I keep having this recurring dream, Joe, all night long . . . feet, feet, feet!"

Contributions, gags, sayings, ideas and just plain letters for this column are appreciated. They will be used with or without your name (let us know) as you desire.

Write: Bob Hughes, D.S.C.
1592 D. Street
San Bernardino, Calif.

THE FUNGUS DIAGNOSTIC SERVICES

Before inoculation



After inoculation

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"LIFE'S FOUNDATION — YOUR BABY'S FEET" is an outstanding and comprehensive booklet on the growth and care of children's feet. Written for the layman, it is concise, cleverly illustrated and will prove valuable especially to the parents of young children. Many Podiatrists-Chiropodists have received a copy of this booklet and have ordered them in quantity. For those of you who have not ordered and for those who wish to reorder, please clip the order blank below and mail with your check for your supply.

WOMEN'S AUXILIARY
AMERICAN PODIATRY ASSOCIATION
(National Association of Chiropodists)
2035 WEST ALABAMA, HOUSTON 6, TEXAS

Please ship to me "Life's Foundation — Your Baby's Feet" in the quantity marked

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